EFFECT OF COMPLEMENTARY AND ALTERNATIVE THERAPIES IN TERMS OF POSTNATAL BLUES AND SELF – ESTEEM AMONG POSTNATAL MOTHERS

A THESIS

SUBMITTED TO THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY
CHENNAI FOR THE AWARD OF THE DEGREE OF
DOCTOR OF PHILOSOPHY IN NURSING

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2014

A STUDY TO EVALUATE THE EFFECTIVENESS OF COMPLEMENTARY AND ALTERNATIVE THERAPIES IN TERMS OF POSTNATAL BLUES AND SELF - ESTEEM AMONG THE POSTNATAL MOTHERS ADMITTED AT GOVERNMENT RAJAJI HOSPITAL, MADURAI

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SUBMITTED TO THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY
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CERTIFICATE BY GUIDE

This is to certify that the work embodied in the thesis entitled **"A Study to Evaluate the Effectiveness of Complementary and alternative therapies in terms of Postnatal blues and Self - esteem among the Postnatal mothers admitted at Government Rajaji Hospital, Madurai"** submitted by Mrs. Shanmugam Rajamani for the award of the degree of Doctor of Philosophy in Nursing is a bonafide record of research work done by her during the period of study under my supervision, and guidance, and that it has not formed the basis for the award of any degree, diploma, fellowship or anyother similar title previously.

I also certify that this thesis is her original independent work. I recommend this thesis should be placed before the examiners for the award of Ph.D degree

Place: Madurai

Date: 24.09.2014

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CERTIFICATE BY CO-GUIDE

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DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation/theses entitled **"A Study to Evaluate the Effectiveness of Complementary and alternative therapies in terms of Postnatal blues and Self - esteem among the Postnatal mothers admitted at Government Rajaji Hospital, Madurai"** submitted by me for the degree of **DOCTOR OF PHILOSOPHY IN NURSING**, is my original and independent work done, during the year 2010 – 2014 under the supervision of Dr. R. Rajkumar, M.D, Ph.D, Research Guide, CSI Jeyaraj Annapackiam College of Nursing, Madurai. The work has not formed the basis for the award of any degree, diploma, fellowship or any other similar title previously.

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Acknowledge him in all your ways and he shall direct your paths"

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ABSTRACT

Background: Maternity blues or postpartum blues may be a normal reaction to the dramatic physiologic changes that occur after delivery. It is a serious mood disorder that emerges within a week after delivery. One out of eight postnatal women may experience blues in their lifetime, it affects 11.5 million people every year globally, and approximately 15% of the patients commit suicide.

A happy well - adjusted person is known to be concerned about the happiness of others. Thus, when you have adjusted to the situation you will also wish to contribute something towards the welfare of others and tend to have good maternal Self - Esteem.

Aim: This study will evaluate the effectiveness of complementary and alternative therapies in terms of postnatal blues and self - esteem among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

Methodology: A true experimental with a posttest only control group design was used in this study, the conceptual framework in this study was based on Newman's Health Care System Model (1982). Based on power analysis, a sample of 300 postnatal mothers (150 for interventional group and 150 for control group) who were admitted at the Government Rajaji Hospital Madurai, were selected by simple random sampling (lot method). The tool used in this study was Modified Kennerly and Gath Blues scale and Maternal Self - Esteem Scale. A pilot study was conducted among 60 postnatal mothers at Gowrie Health Centre, Madurai. Data were collected from 04.03.2013 to 03.03.2014, at Govt Rajaji Hospital, Madurai after obtaining Ethical Clearance, and informed written consent. Socio-demographic variables, obstetrical variables, postnatal blues, and maternal self - esteem were assessed.

Then complementary and alternative therapies was administered by the investigator to the mothers in the interventional group for 30 minutes, twice (10 am, 4 pm) a day for five consecutive days along with routine care, whereas the control group received only routine care. Then posttest postnatal blues and maternal self - esteem of the subjects were assessed on 5th day.

Results: There was a significant decrease in level of postnatal blues and improvement in the level of maternal self - esteem following 10 sessions of complementary and alternative therapies. There was a statistically significant difference in the question wise postnatal blues and maternal self - esteem scores between the interventional and the control group. On an average, postnatal blues in the interventional group was reduced by 20.8% and maternal self - esteem was improved by 25.9% than the control group.

There was a significant association between the level of postnatal blues and locality of residence, educational status of postnatal mothers, educational status of husband, type of family, in the interventional group. There was a significant association between the level of postnatal blues and age**,** work pattern, in the control group.

There was a significant association between the level of postnatal blues and Antenatal OPD registration, duration of stage I, stage II, and stage III, in the interventional group. There was a significant association between the level of postnatal blues and presence congenital abnormalities of the child, Health Status of the child, in the control group.

There was a significant association between the level of self - esteem and age, educational status of the mother, type of family, income of the family, in the interventional group.

There was a significant association between the level of self - esteem and locality of residence, educational status and work pattern in the control group.

There was a significant association between the level of self - esteem of the postnatal mothers in the interventional group and III rd stage of labour, congenital abnormalities of the child, health status of the child, of the obstetrical variables in the interventional group. There was a significant association between the level of maternal self - esteem and III rd stage of labour in the control group.

There was a negative correlation between postnatal blues and maternal self - esteem among the postnatal mothers in the interventional group.

Place of residence, education status of postnatal mothers, educational status of husband, type of family and duration of labour in stage I were the significant contributing factors for reducing postnatal blues among postnatal mothers in the interventional group and on the other hand age, type of family, monthly income, duration of labour in stage III were the significant contributing factors for improving self - esteem among postnatal mothers in the interventional group.

The results imply that adding complementary and alternative therapies with routine treatment has contributed to obtain additional benefit in reducing postnatal blues and in improving maternal self - esteem among the postnatal mothers, which addresses the feasibility of the intervention in Indian scenario.

Key words: Complementary and alternative therapies, Postnatal blues, Maternal self - esteem, Postnatal mothers.

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CHAPTER I

INTRODUCTION

Parenthood is a life time adventure and achievement. Babies are not born with user manuals to teach us the way in which they are to be taken care of. Creating a secure environment and a loving relationship for the baby does not come from the books or from the manuals but it has to be from the inner and deeper emotions of the mother and the family. Asking for help when the mother needs it, identifying the strengths as a parent, and attempting to be consciously aware of the obstructions will help the mother to provide a fruitful child hood memories for the baby. Research shows that the mothers or parents who did not have good parents or who did not have fruitful child hood or the mothers who had a traumatic child hood days will tend to be a good parent and will pose a healthy relation with their babies and make sense in their lives. Because they think what has happened to them in the past, understand it act accordingly to overcome this in caring for their babies in the future. The opportunity to change and grow continues to be available throughout our lives.[1]

The birth of a healthy baby is a joyous occasion for both the mother and her family. The struggles underwent during pregnancy and child birth is accepted with a gentle smile. “The art of motherhood involves much silent, unobtrusive self denial, an hourly devotion, where no one can record or understand. On the other hand pregnancy and motherhood is not a joy but is a melancholy. Post partum blues is described as “a thief that steals the mother hood” without clinical intervention, post partum blues may affect both the mother and the child for a long time and can lead to serious psychiatric illnesses.[2]

1.1. Background of the Problem

Pregnancy and puerperium is a period of tight corner and is stressful in a mother's life. The postnatal mother is threatened by various changes in mother's physique, and endocrine changes occurring in one's own body, as she is in reorganization of her emotional patterns for a new mother role especially when the mother is primi. Body image changes and unconscious intrapsychic conflicts related to pregnancy, childbirth, and mother hood become activated. Among the primipara mothers 25% to 50% of the pregnant women develop mild psychological symptoms in the puerperal period which is common type known as the postnatal blues.[3]

Women's life is cautioned by various changes that occur during labour and in the postnatal period such as body image. Transition of parenthood was viewed as a crisis for both the father and the mother. Usual methods of coping often seem to be ineffective due to various reasons. Some parents can be so distressed that they are unable to be supportive to each other. Strong emotions such as helplessness, inadequacy and anger that arise when dealing with a crying infant catch many parents unprepared. Parents are stimulated to try new coping strategies as they work to master their new roles and reach new developmental levels.[4]

Postnatal blues is a serious mood disorder that emerges within a week after labour and delivery. If depression is crawling into mother's life, the event is critical which interferes in postnatal women's ability to recognize and respond to their infants cues in a sensitive way and thwarts the evolving maternal- infant relationship.[5]

When the mother's support system is disturbed, if the support is not available in the first few days or weeks after delivery. The new first time mother especially without a support system or who underwent cesarean section may feel that she has no

time to care for her baby and her physical and emotional needs. They become frightened at the strong contradictory emotions they feel. [6]

Pregnancy may hide the relationship problems, that is, not aware of the problems or may have problems in exposing the problems related to relationship. It also masks the lifestyle ruts that will eventually resurface after delivery. In other words, one should understand that the older problems will not disappear just because the women have delivered a baby.[7]

Maternity blues or postpartum blues are normal reaction to physiologic changes that occur after delivery. The symptoms of postnatal blues begin in the first few days after delivery, go to its peak on the 5th day and last up to 10 days, which includes crying, irritability, fatigue, anxiety, and emotional lability.[8]

Postnatal mood symptoms are divided into three types and they are postpartum blues, psychosis, and depression. Postpartum blues are shorter episodes which lasts for 1-4 days, which consists of frequent mood changes and tearfulness among 60% to 80% of the deliveries. Post partum psychosis occurs within 2-3 days after delivery. Post partum depression may occur from 2weeks to 12 months after delivery. 10% to 15% develop postpartum depression and this incidence is higher where there is a previous history of psychiatric disorders.

According to American psychiatric association - 2008, one out of eight postnatal women experiences blues in their lifetime. It affects 11.5 million people every year. The prevalence of postpartum blues among women was 15% to 18%, and among them approximately 15% of the postnatal women commit suicide. Subsequent studies have found very similar prevalences. Severe postnatal depression occurs in few women 5 in every 1000 delivered.[9]

According to Lazarus, two postnatal mothers in thousand deliveries develop severe psychiatric symptoms. In the developed countries 10% to 20% of the women develop postpartum blues and it negatively influences maternal, infant, and family health. He also quotes that about 15% to 25% of the post partum blue mothers have a recurrent episode usually during the next puerperium and may lead to postnatal depression or postpartum psychosis. The duration of the disorder is prolonged when there is folate deficiency.[10]

The risk for postnatal blues which leads to depression is 20% to 30% and is common in adolescents and early adulthood. This also has a difference across the various cultures and continents. Deaths due to psychiatric causes are the most common cause of maternal death. Other complications of maternal mortality were marital, parental, vocational and social difficulties. Research findings were also consistent with this finding. [11]

Maternity blues and postpartum depression are common complications of pregnancy and labour. Studies show there is a relationship between the severity of maternity blues and the risk of postnatal depression. In a longitudinal study conducted among Japanese women to show whether if maternity blues is a useful factor for predicting postpartum depression. 235 women were selected and asked to complete steins scale at delivery, and five days, one month, and three months after delivery. Regression analysis was done to evaluate the relationship and the findings suggest that maternity blues is a strong predictor of postpartum depression. When the blues score increase the risk of postpartum depression also increases.[12]

Perrens, states that within days following birth, most women show signs of mood changes, commonly named Baby Blues. Due to the frequency of this condition, Baby Blues is considered as a physiological state associated with biological changes.

The clinical background of the condition related needs to be reported and explored. Few studies confirm the link existing between intensity of Baby Blues and post-partum mood disorder.[13]

80% of postpartum women suffer from the postnatal blues. This is a mild form of mood disturbance where symptoms last for few hours to many days, and the symptoms are crying without being able to stop, irritable mood, hypochondriasis, sleeplessness, impaired concentration, and headache.[14]

In India among the depressive disorders 23% of the mothers had history of psychological morbidity in the prenatal period. More than half of the mothers remained ill till six months after delivery.[15]

Studies undertaken in South Asia have documented substantial rates of postnatal blues. In Tamil Nadu, a cohort study by Chandran et al reported that the prevalence was 19.8% and incidence was 11% respectively these studies also showed that depressed mother's had significantly greater levels of disability.[16]

Many women anticipated pregnancy as a joyful event and on the other hand motherhood as a stressful period. Psychological distress during pregnancy may result in poor prenatal care, premature delivery, low birth weight, and depression. The same psychological distress after childbirth can lead to neglecting the child, family breakdown, and suicide. This, in turn leads to breakdown of emotional bonding with her newborn which may pave way to cognitive delays and behavior problems. When the depression is identified early enough help may be available for mother and child.[17]

Self-esteem is an aspect of personality which is cultivated across the lifespan. Dedicated introspection and mindfully growing self-understanding allows for increased ease and fruitful connections. Pregnancy may awaken previously untouched, powerful feelings about self-worth, body image, and familial relationships. People argue that pregnancy is miraculous. But it doesn't mean that the internal struggles will disappear miraculously during pregnancy, instead, a resurgence of unknown fears may bubble to the surface during this nascent experience.

Happy and harmonious family is a dream of every person. Everyone in this universe wants to have warm and friendly relationship between members of the family. Hence, all the family problems could be handled together to uplift a happy and a fruitful family. Children expect that their parents have to spend time with them and parents also think vice versa to have a good relationship.

An individual with high self-esteem feels good about him/her and can face challenges in life more effectively. High self-esteem provides the basis for success in coping with daily life in a rapidly changing environment. The person himself or herself is responsible for his/her own self-esteem and others such as family and parents can only support the choice of a person's self - esteem. An adult mother with a healthy self-esteem is highly successful.

Self-esteem is an important factor which improves mother's life, and also the life of any person who comes in contact with the mother. A person who has high self-esteem will respect himself and think of himself usable, whereas person with low self-esteem cannot accept themselves and they think that they are useless, unsatisfied and less self worthy.[18]

The literal meaning of self-esteem is truly loving and valuing oneself, this is a personal assessment of worthiness. Postnatal mothers with high self-esteem will be better stable and confident and are less influenced by their environments and situations.[19]

Self-esteem is the evaluative aspect of the self-concept, and therefore the evaluation of a person's own competence, is related to accepting and approving of one's own characteristics. Williams (2001) defines self-esteem as "great impact on individual's attitudes, emotional experiences, future behavior, and long-term psychological adjustments".

Low self-esteem also has an impact on the individual processes and how he/she protects and strengthens their self - esteem. In the information processing, the following are things that usually found in a low self-worth individual; involve or interact with the things or negative situations. Individual process information shows that individual is focused on negative label rather than positive label which are related to one's self-esteem.[20]

A study to examine the relationship between maternal self-esteem and maternal attachment was undertaken among mothers having premature infants who were admitted. The tool used was a socio-demographic data, the Maternal Self-Report Inventory (MSRI), Rosenberg Self-Esteem Scale. 32 mothers whose premature infants were medically stable and hospitalized in the NICU were studied. There was a significant relationship between maternal self-esteem and global self-esteem. Thus, maternal role influenced general self-concept in mothers. There were no significant relationships between the Maternal Self Report Inventory and socio demographic variables, such as: maternal age, marital status, income, and educational level. The findings of the study suggested that clinical nurses need to pay attention not only to

care giving skills but also to the mother's self evaluation of herself. [21] A study to identify the biological and psychosocial factors responsible for postpartum blues were explored in a prospective study. A sample of 185 pregnant women were selected conveniently at the second trimester and they were followed until postpartum period. The measures such as previous history of psychiatric illness in the family or in the individual, stressful life events, social support, and social adjustment were measured at the time of sample selection. Hormones such as progesterone, estradiol, prolactin, and cortisol were also measured during pregnancy, labour and child birth and in the postpartum period. Maternal blues were assessed after delivery on the 3rd day. The factors responsible were family history of depression, poor social adjustment, exposure to more stressful conditions without support system, and levels of free and total estriol.[22]

Another study explored the significance of maternal cognitions, psychopathological symptoms, and child temperament in the prediction of prenatal and postnatal maternal self-esteem. 162 women who were pregnant were selected for data collection and the collected data were on self - esteem and postnatal blues at 1 year postpartum. Overall maladaptive maternal core beliefs and psychopathological symptoms during pregnancy explained 19% of the variance in prenatal maternal self-esteem. 42 % of them had a variance in maternal self-esteem at 1 year which was explained by a combination of prenatal maternal self-esteem, mental health symptoms, maternal core beliefs, and more unsociable infant temperament. The maternal cognitive structures had an impact on the development of maternal self-esteem.[23]

A study was investigated to find if the retrospective effects of maternal employment on young adults were carried out on 70 students from an urban college. using a Rosenberg's self - esteem scale, Synder's Hope Scale and the General Health Questionnaire. A cross sectional survey design was employed. The results revealed that there was a significant difference between gender reported in general health (t (28.816) = -2.399, p = .023) in the employed mothers group. There was no significant difference between the two groups. The analysis also found out that maternal employment was not dangerous to psychological outcome in young adulthood for hope, general health and self-esteem.[24]

A quasi-interventional study performed to investigate the effect of a home visiting discharge education program on maternal self-esteem, attachment, postpartum depression and family function was carried out among 35 mothers.

The experimental group participants were given home visiting discharge education while the participants in the control group received the treatment as usual only. Pretest assessment was collected in both groups one day after delivery. The tool used was maternal self-esteem scale; postpartum depression and family function were collected within 1 week after the discharge by mail. The maternal self-esteem scores and attachment significantly increased, whereas postpartum depression scores decreased after the home visiting discharge education in intervention group. There were no changes in these variables before and after the routine hospital-based discharge education in control group. [25]

1.2. Need for the study

Mental health problems are common and there is evidence to suggest that the origins of such problems lie in infancy and childhood. In particular, there is evidence from a range of studies to suggest that maternal psycho - social health can have a significant effect on the mother-infant relationship, and this in turn can have consequences for both the short and long-term psychological health of the child.

A total of 23 studies were taken and another 3 studies were added. Of these 20 provided sufficient data to calculate effect sizes. The existing 20 studies provided a total of 64 assessments. The outcome were anxiety, stress, self-esteem, social competence, social support, guilt, mood, automatic thoughts, dyadic adjustment, psychiatric morbidity, irrationality, anger and aggression, mood, attitude, personality, and beliefs. The findings of the meta-analyses show statistically significant results favouring the intervention group for depression; anxiety/stress; self-esteem; and relationship with spouse/marital adjustment. Another 40% showed non-significant differences favouring the intervention group. Approximately one-third of outcomes showed no evidence of effectiveness. The results show that there was a continued improvement in self-esteem, depression, and marital adjustment at follow-up, although the latter two findings were not statistically significant. Additional sensitivity analyses to assess the impact of quasi-randomized studies on the result have also been added. Where the quasi-randomized studies are excluded from the analysis, the result was found to be slightly more conservative.[26]

Transformation of parenthood creates a number of new roles, stressors, and demands on the individual. Despite the strain and multiple tasks of parenthood, it is important for parenting to be successful. A mother has to maintain optimum levels of energy and self-efficacy to have positive parenting roles and to rear the child

successfully. A mediational model was examined which reflected the influence of physical activity on the mother. Examining the relation of physical activity and maternal self-efficacy and energy is a necessary addition to both the parenting and maternal health promotion literature. A hypothesis was set that exercise and physical activity would have a direct relationship with maternal self-efficacy and energy. The sample consisted of 170 mothers. Among them 53% were Caucasians and 47% was African Americans. Participants filled out questionnaires on current exercise and overall physical activity level, mood, self-esteem, maternal self-efficacy. The results revealed that the hypothesized model fit the data and was accepted. The present exercise level and physical activity level directly predicted the mother's maternal energy. Mothers who exercised and were more active reported significantly more energy with their children. Also it was concluded that mother's exercise-energy relation was partially mediated by better mood and self-esteem. The findings from this study offer insight into possible areas for intervention and future research.[27]

Mind-body therapies (MBT) are used by 16.6% of adults in the United States. Little is known about the patterns of and reasons for use of MBT by adults with common medical conditions. In a study, conducted on usage of MBT from the 2002, National Health Interview Survey Alternative Medicine Supplement (n=31,044). MBT included the common relaxation techniques such as deep breathing exercises, guided imagery, meditation, and progressive muscle relaxation, yoga, tai chi, and qigong.

To identify the medical cases which were treated commonly with MBT on an overall, the author used multivariable models adjusted for socio demographic factors, insurance status, and health habits. Among the MBT users (n=5170), they assessed, medical conditions were most frequently treated with MBT, additional rationale for using MBT, and perceived helpfulness. The findings suggested that there was a positive association between MBT use and pain syndromes, anxiety/depression. More than 50% of respondents used MBT in along with the conventional treatment, and in 20% of the cases MBT was used where conventional medicine would not help.

Guided imagery is an intervention used by nurses in a variety of settings. It has been proved since long time that better results may occur with continued usage. On the other side there were no studies which showed the relationship between practice duration and strength of outcomes.

A meta analysis conducted to evaluate the effectiveness of guided imagery was undertaken on the statistical findings of 10 studies of various durations. The findings were converted to statistics and plotted against the duration of study. The results revealed that there was an increase in effect size of guided imagery over the first 5 to 7 weeks; however, the effect decreased by 18 weeks.[28]

Cognitive behaviour therapies i.e. Mind-body approaches such as meditation, yoga, progressive relaxation and supplements such as fish oil may be good adjuncts to psychotherapy. Majority of the pregnant women prefer mindfulness yoga to other mind-body techniques.

A pilot study found that mindfulness yoga significantly decreased the depressive symptoms, psychological distress and increased maternal-fetal attachment, particularly in mildly depressed women. For women who do not want to undergo

traditional treatment, alternative approaches such as progressive relaxation can be easily used and can help reduce depressive symptoms. Regular exercise may improve self-esteem and reduce symptoms of depression and anxiety in pregnant women.

Throughout history, many cultures have used imagery for therapeutic purposes, including the Navajo, ancient Egyptians, Greeks, and the Chinese. It was also practised in all the religions including Hinduism and Judaism. In modern times, the term "guided imagery" may be used to refer to a number of techniques, including metaphor, storytelling, fantasy, game playing, dream interpretation, drawing, visualization, active imagination, or direct suggestion using imagery.[29]

Guided imagery may be used to help patients relax and focus on images associated with personal issues they are confronting. Guided imagery practitioners use an interactive, objective guiding method to encourage patients to find solutions to their problems by exploring their existing inner resources. Interactive guided imagery classes, workshops, and seminars, books and audio tapes are available.[30]

Guided imagery was approved by the British Medical Association since 1955 and it is a valid medical treatment on pain management during child birth and reduces labor time, and statistically reduces the incidence of caesarean section and babies may have higher apgar scores. The most common therapy for postpartum blues is the cognitive behavioral therapy. In many cases cognitive – behavioral psychotherapy techniques are effective in addressing postpartum blues. Such approaches will help the mother to examine her anxiety, stress, anticipate situation in which it is likely to occur and understand its effects. This can help a mother to recognize the exaggerated nature of her fear and develop a corrective approach to the problem.[7]

Guided imagery therapy is a cognitive behavioral technique in which the client is guided to imagine a relaxed scene of experience. It is a gentle powerful technique more often used to promote relaxation and to provide therapeutic benefits including lowering blood pressure, managing pain, reducing stress, reducing postpartum blues, and anxiety. It also boosts one's immune system.

The benefits of guided imagery include reduced stress. It can be easier than exercise or even yoga for those with physical limitation. It has no adverse effects unlike other medical and herbal therapies. It is effective in helping individuals learn or modify behavior, increases learning abilities, relaxes the body and mind, controls the negative emotions and helps to be optimistic.

Pregnancy is considered as one of the most natural experiences; a natal woman can undergo or practise guided imagery to support perinatal process in many ways – physical, emotional, mental and spiritual, aspects. Research had shown that use of guided imagery experiences shorter labor, reduced prescription of pain medications and reduced incidence of surgical delivery and use of forceps additionally. [31]

A randomized controlled study to test whether positive affirmation and guided imagery at labour had an impact on labour and delivery was undertaken on 83 primi mothers who were divided into 2 groups. The interventional group was given guided imagery 18 sessions for 6 days along with routine care whereas the control group received the routine care alone. The level of blues, pain, anxiety and Apgar were monitored both during and after delivery. During delivery pain and anxiety were measured at different stages of birth. The findings suggested that guided imagery group had a significantly better score on total well being and reduced scores of pain, blues, and anxiery.[32]

A study to identify whether guided imagery was effective in reducing blues, stress, and depression among the postnatal mothers were carried out in a selected hospital at Seychelles. A quazi-experimental pre and post test design was used, a sample of 68 pregnant women was selected at 37th week of gestation conveniently and they were assigned to either experimental group or control group. 34 pregnant women in the experimental group practiced guided imagery sessions of 30 minute duration for 10 days along with routine care, whereas the remaining 34 pregnant women were given only routine care.

Blues was measured Skillman's Blues scale on the 5th day postpartum, stress levels were measured by Holmes PSS on 5th day postpartum, and depression was measured by EPDS after 4th week postpartum. The results revealed that interventional group had lesser blues scores, lesser stress scores when compared with the control group. There was no difference in the depression scores between the interventional and the control group. Hence guided imagery was effective in the immediate postpartum period but more research is needed to prove the long terms effect.[33]

An interventional study to demonstrate the effectiveness of guided imagery and self hypnosis in reducing complications of pregnancy was conducted among 100 women whose babies were in breech position at 37 to 40 weeks of gestation. 50 mothers were given guided imagery and treatment as usual. The remaining 50 mothers were given only treatment as usual. The study results revealed that in guided imagery group 81% of the babies spontaneously "turned" to the proper position compared to with 48%of the comparison group. The study concluded that guided imagery and self-hypnosis help them to handle complication that arise at labor.[34]

An interventional study was conducted to see the effectiveness of hypnotic suggestions and deep relaxation on 60 pregnant women, half of whom received

hypnotic suggestion for an enjoyable childbirth, deep relaxation. The remaining received routine care. The study results revealed that treatment group had quicker progress through stage 1of labor, less reported pain, less use of medication and their babies had higher Apgar scores at 1 and 5 minutes. The study concluded that guided imagery can increase women's feelings of control and confidence in a labor process, significantly reduces their perception of pain.[35]

Anxiety, baby blues, and stress are the common complaints or problems that occur during pregnancy and post partum. A study to assess the effect of guided imagery in the pregnant period on anxiety and baby blues was carried out on a large scale teaching hospital at Montreal. A sample of 266 pregnant women was selected randomly at 30th week of gestation and was assigned to interventional group (133) and the control group (133). The pregnant women in the interventional group underwent guided imagery sessions of 30 min duration, two sessions in a week till labour along with usual care whereas the control group pregnant women were given the usual care only.

Anxiety was measured with STAI, and baby blues was assessed by Steins blues scale after child birth on the 3rd day. The findings revealed that the pregnant women who practiced guided imagery showed reduced anxiety and baby blues than compared with the usual care group. Hence guided imagery had a positive effect on anxiety and baby blues.[36]

Preventing the Baby Blues is something almost every expecting mother wants to do. Mothers spend hours together in preparing for their little ones, doing everything from prenatal yoga, playing music to their womb, and meal planning. It's impossible to keep identity what is important for a healthy pregnancy. One thing that is well established is that appropriate nutrition greatly improves pregnancy outcomes for both

mom and baby. During pregnancy, a woman's physiology changes dramatically to meet the needs of the growing baby. Nutritional demands, in the form of fat, protein and calories, must be increased to ensure that these physiological changes are met.[37]

Yoga was introduced in 19th century, when learned scholars translated ancient Hindu religious texts. Yoga has gained its berth since 1960s and had become popular when it was used in the health care programmes such as treating heart disease. More research on yoga and its effectiveness have been carried out in the last 40 years. A well-known US study from 1960s was done at Menninger Foundation, Kansas, showing that yoga meditation clearly affects the heart and circulation (2). A research published by British Thoracic Society showed that yoga breathing reduced the frequency of asthma attacks (3). Enormous numbers of academic papers have been written on the effect of yoga. A study reported in 1992 in the American Journal of Psychiatry demonstrated that meditation could reduce anxiety, panic and agoraphobia. Researchers at the University of San Diego had found that yogic breathing technique can shift cerebral hemispheric activity, helping to alleviate the symptoms of Obsessive Compulsory Disorder.[38]

A study to evaluate a yoga programme provided to primigravidas in the third trimester of pregnancy with the aim of decreasing the discomforts associated with pregnancy was done on 88 Primigravida at 26-28 weeks of gestation (no high-risk pregnancies) who did not do any exercise or yoga for at least one year were included. 43 primigravida were allotted in the control group and 45 were allotted in the interventional group who took part in the prenatal yoga programme. Prenatal yoga programme was given for 12-14 weeks, with at least three sessions per week. Each workout lasted for 30 minutes.

The findings suggested that primigravida women who took part in the prenatal yoga programme had lesser pregnancy discomforts than the control group (38.28 vs 43.26, Z = -2.58, p=0.01) at 38-40 weeks of gestation. The primigravida who participated in the yoga group revealed higher outcome and self-efficacy expectancies during the active stage of labour as compared with the control group.[39]

A framework has been developed that provides nurses with a theoretical basis for using relaxation with guided imagery among primiparas to reduce their anxiety and depression, and in increasing their self-esteem, thereby promoting maternal role attainment and expected infant behavior during the postpartum period. Although relaxation with guided imagery (RGI) has been used in various conditions, no research studies were found that reported using RGI with new mothers. However, because RGI has been effective in altering the responses of adults and children in diverse settings, it was explained and found out that RGI could be effectively used in helping primiparas adapt to the pressure of parenthood by providing a RGI protocol for use with new mothers .[40]

Prenatal maternal stress is associated with adverse birth outcomes and may be reduced by relaxation exercises. The aim of the present study was to compare the immediate effects of two active and one passive 10-min relaxation technique on perceived and physiological indicators of relaxation. 39 healthy pregnant women recruited in a randomized controlled trial with an interventional repeated measure design. Subjects were grouped into one of the two active relaxation techniques, progressive muscle relaxation (PMR) or guided imagery (GI), or a passive relaxation control condition; the parameters were measured at four points before and after the relaxation exercise. The findings stated that GI was significantly more effective in relaxation and along with PMR, GI was associated with a significant decrease in heart rate. GI was effective in inducing self-reported relaxation in pregnant women while at the same time reduced cardiovascular activity.[41]

A study to compare the effectiveness of exercise levels on satisfaction and maintenance of body image among the antenatal women was undertaken pregnant women. A sample of 71 healthy pregnant women were selected at 6 months before pregnancy till 30 weeks of gestational age. A prospective research approach was used in the study. Among the 71 pregnant women 40 of them were allotted to higher exercisers group and the remaining 31 pregnant women were low exercisers. The antenatal women filled a questionnaire at 15th week of gestation and at 30th week of gestation.

The findings revealed that the pregnant women who were high exercisers had higher level of satisfaction regarding their body imager at 22nd week of gestation when compared with the lower exercisers. When the scores were compared at 30th week there was no difference in the level of satisfaction between the high exercisers and low exercisers.

When the high exercisers were compared with in their group; the pregnant women were more satisfied at the 22nd week of gestation when compared with the prepregnant stage or at 30th week of gestation. Hence, the pregnant women who do exercise during pregnancy can expect changes in their body image at early pregnancy than those who do not exercise.[42]

The researcher felt that, when postnatal mothers are equipped with ways of how to adjust with the postpartum period, their chances for severe blues might diminish and on the other hand when postnatal blues decrease the maternal self - esteem among the postnatal mothers will improve. Hence, this research was undertaken.

The investigator from her personal experience during her clinical postings at psychiatric wards and postnatal wards identified many symptoms leading to melancholy, reduced self-esteem and reduced concentration because of stress and tension related to puerperal complications and the investigator had cared for such clients during her clinical postings at the Government Rajaji Hospital Madurai.

From the literature search, the investigator could identify only very few studies related postpartum blues among the postnatal mothers in India. Despite growing knowledge postnatal blues and its relation with the postnatal mothers is a major childbirth complication that leads to postpartum depression in due course. Hence, the investigator felt that there is a need to teach them the important aspects of postnatal care of mother and the baby and to find out the effectiveness of the complementary and alternative therapy in terms of postnatal blues among the postnatal mothers in Madurai.

Further, the level of postnatal blues among the postnatal mothers could be improved by providing adequate and appropriate teaching to the clients, as well as the investigator was more interested to impart education, and administer complementary and alternative therapies so as to and create awareness on post partum blues, and maternal self - esteem among the postnatal mothers. Hence, there was an immense need to undertake this study. The present study was undertaken to add evidence based information in the field of post partum blues, and maternal self - esteem, among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

1.3. Over all aim

The study was aimed in assessing the effectiveness of complementary and alternative therapies on postnatal blues and self - esteem. The study findings from the interview will be elicited here to provide a clear understanding of the postnatal mother's feelings.

Women in reproductive cycle plan an important role in mental health. Fluctuating hormone levels and reproductive events may trigger the exacerbation of a Nurse's contact with a woman during routine care may provide a critical opportunity to recognize a problem and influence a woman to seek help. Screening, identification, and prevention are important interventions to be followed. Hence, there was an immense need to undertake this study.

1.4. Statement of the problem

"A study to evaluate the effectiveness of Complementary and alternative therapies in terms of postnatal blues and self - esteem among the postnatal mothers admitted at Government Rajaji Hospital, Madurai".

1.5. Objectives

1. To assess the posttest level of postnatal blues and self - esteem among the postnatal mothers in the interventional group and control group.
2. To evaluate the effectiveness of Complementary and alternative therapies in terms of postnatal blues and self - esteem among postnatal mothers between the interventional group and Control group.
3. To find out the association between the level of postnatal blues with selected socio demographic, obstetrical variables among postnatal mothers in the interventional group.
4. To find out the association between the level of postnatal blues with selected socio demographic, obstetrical variables among postnatal mothers in the control group.
5. To find out the association between the level of self - esteem and selected socio demographic, obstetrical variables among postnatal mothers in the interventional group.
6. To find out the association between the level of self - esteem and selected socio demographic, obstetrical variables among postnatal mothers in the control group.
7. To determine the relationship between the postnatal blues and self - esteem among the postnatal mothers.

1.6. Hypotheses

The study aimed to test the following hypotheses. All hypotheses was tested at 0. 05 level of significance.

1. The mean blues scores of the postnatal mothers who receive complementary alternative therapies will be significantly lower than the mean blue scores of the postnatal mothers who do not receive complementary and alternative therapies.
2. The mean self - esteem score of the postnatal mothers who receive complementary alternative therapies will be significantly higher than the mean self - esteem scores of the postnatal mothers who do not receive complementary and alternative therapies.
3. There will be a significant association between the level of postnatal blues and selected Socio demographic, obstetrical variables among the postnatal mothers in the interventional group.
4. There will be a significant association between the level of postnatal blues and selected Socio demographic, obstetrical variables among the postnatal mothers in the control group.
5. There will be a significant association between the level of self - esteem and selected Socio demographic, obstetrical variables among the postnatal mothers in the interventional group.
6. There will be a significant association between the level of self - esteem and selected Socio demographic, obstetrical variables among the postnatal mothers in the control group.
7. There will be a significant relationship between the postnatal blues and Self - esteem among the postnatal mothers.

1.7. Operational definitions

Effectiveness

It is the outcome of complementary and alternative therapies, which will be identified in terms of enhanced maternal self - esteem and decreased postnatal blues. In this study the outcome complementary and alternative therapies in terms of postnatal blues and self - esteem as measured by modified Kennerly and Gath blues assessment scale and maternal self – esteem scale.

Complementary and Alternative therapies

It is a set of interventions which is given in such a way to adopt or enlighten the mothers on maternal adjustment with regard to postnatal blues and self - esteem, which consists of prophylactic information, Exercises and Yoga therapy (Pranayama), and guided imagery.

a. **Prophylactic information:** which comprises of a well planned information to enlighten the mothers with regard to postnatal blues its causes, signs and symptoms of postnatal blues, strategies to make a life a little easier in early postpartal period, accepting help, following shortcuts, being kind to themselves, changing their thinking, and helping the family to adapt so as to prevent postnatal blues. It will be given for 30 minutes, only once on the first day.

b. **Exercises and yoga therapy:** which consisted of postnatal exercises such as kegels, exercises for the abdominal muscles and the back muscles (7 min), along with yoga therapy – Pranayama (8 min) total of 15 min will be given twice a day for 5 consecutive days. This aids in improving the body image and physical health.

c. **Guided imagery:** it is the use of relaxation and mental visualization to improve the mood and physical well being. A healing technique that fully exploits the connection between mind and body. It's a two part process (deep relaxation, imagery) guided imagery will be given by auditory stimulation by using walkman and visual stimulation with the help of motion pictures. It will be given for 20 min twice a day for 5 consecutive days.

Postnatal Blues

It refers to acute onset of depressive symptoms within one week after delivery during the postnatal period. In this study, it refers to postpartum mood symptoms such as labile mood, tearfulness, sad mood, psychomotor symptoms such as restlessness, agitation, and impaired concentration / impaired decision making. This will be measured by the researcher with modified Kennerly and Gath blues assessment scale.

Self - esteem

It is one's judgement of one's own worth that a person's standard and performances compared to others and also to one's ideal self. In this study, it refers to the worth of a postnatal mother regarding her own self, mothering role, and parental influences which will be measured by a maternal self - esteem scale developed by the investigator.

Postnatal mothers

Postnatal mothers refer to all mothers in the postnatal period who had given birth to a child. In this study postnatal mother refers to who have given birth for the first time by vaginal delivery and are in the postnatal ward from day 1 to day 5, admitted at Government Rajaji Hospital, Madurai.

1.8. Assumptions

1. A large percentage of the postnatal mothers may experience varying level of postnatal blues
2. Majority of the postnatal mothers who have postnatal blues have impaired maternal adjustment and low self - esteem
3. Complementary and alternative therapies given to the individuals may provide an opportunity for active learning among the participants may improve maternal adjustment and may prevent postnatal blues, and improve maternal self - esteem.
4. The Nurses play an important role as a therapist and as an educator to postnatal mothers.

1.9. Delimitation

The study was limited to:

1. Postnatal mothers admitted at Government Rajaji Hospital Madurai.
2. Postnatal mothers available at the time of data collection.
3. Complementary and alternative therapies will be given to the postnatal mothers twice a day for 5 consecutive days.

1.10. Projected outcome

The study will be conducted to determine the level of postnatal blues and self - esteem among the postnatal mothers and its relation with the maternal adjustment. From this study, the effectiveness of the complementary and alternative therapies regarding postnatal blues in terms of maternal adjustment will be understood.

This study will help in preventing the risk of postnatal blues among postnatal mother and it helps to improve the maternal self – esteem of postnatal mothers there by reducing the risk of developing postpartum depression

1.11. Conceptual Framework

The conceptual framework for this study is based on Neuman's system model. Neuman system model has components of human being experiences, basic core structure, lines of resistance, normal line of defense, flexible line of defense, stressor, primary prevention, secondary prevention, and tertiary prevention.[43]

Basic Core Structure

These basic structures encompass to factors or energy, resources, necessary for client survival. They include factors common to all people as well as these that are unique to each. These factors include physiological, psychological, socio cultural, developmental and spiritual variables.

Lines of Resistance

Represent the internal factors of a person that help defend against a stressor. Attempt to stabilize the person and encourage a return to the normal line defense.

Normal Line of Defense

Refers to the equilibrium state or the adaptation state that a client has developed over time this state is the norm for the client.

Flexible Line of Defense

Act as a protective barrier to prevent stress are from breaking through the normal line of defense.

Degree of Stressor

A person's reaction to a stressor is determined by natural and learned resistance, which is manifested by the strength of the lines of resistance and of the normal and flexible lines of defense. The degree of reaction is determine by the type and strength of the stressor as well by the persons basic core structure, experiences, available energy resources and perception of the stressor. The interrelationship of variables also determines the nature and degree of a person's reaction to the stressor. As part of the reaction, a person's system can adapt to the stressor, this adaptation is called reconstitution. According to the Neuman, specific interventions are used to retain or maintain system stability these include primary, secondary and tertiary prevention.

Primary Prevention

Refers to intervention before a reaction occurs according to Neuman the stressor is suspected or identified and viewed as a possible risk to the normal line of defense.

Secondary Prevention

Refers to intervention after a reaction occurs includes early case findings and treatment of problems.

Tertiary Prevention

Refers to intervention after active treatment of reaction. Takes place when reconstitution or some degree of stabilization has occurred.

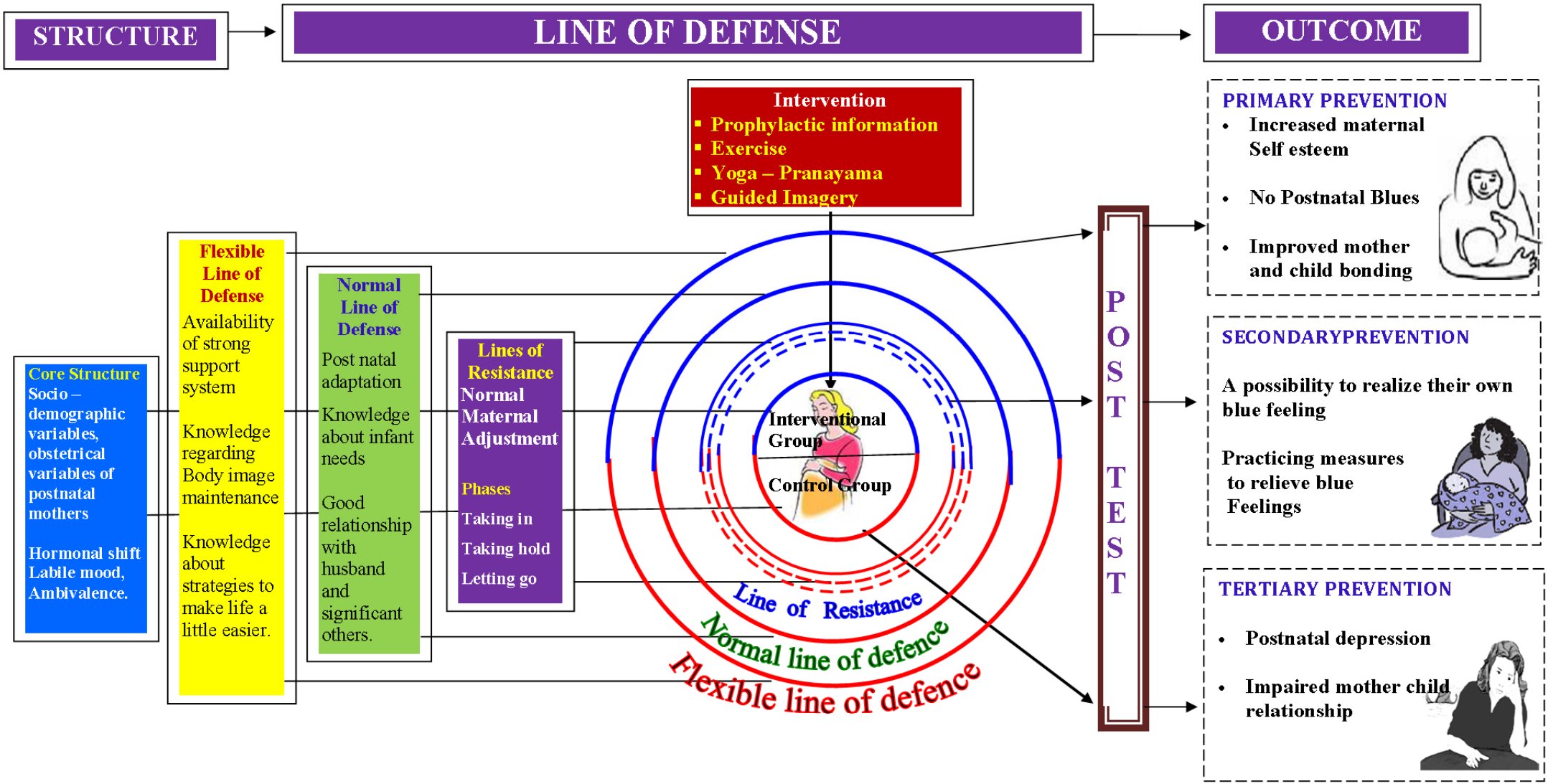
Integrating Neuman's Model to the Present Study

- The basic core structure is compared to the postnatal mother's physiological, psychological developmental states. This consists of the socio-demographic variables, obstetrical variables of the postnatal mothers. It also consists of factors such as hormonal shift, labile mood of the postnatal mothers, and ambivalent nature of the postnatal mother.
- The lines of resistance refers to the normal expected phases of maternal adjustment which are
    - **Taking in phase** - In which the postnatal mothers talks about labour and delivery experiences,
    - **Taking hold phase** – In which the postnatal mothers identifies own needs and baby's needs
    - **Letting go** – In which the postnatal mothers adopts a modified life style which includes baby's needs.
- Normal line of defense is portrayed as a state of equilibrium required by a postnatal mother to cope with the postpartal expectation. This state is the norm for the clients, i.e. postnatal adaptation in which knowledge about infant needs and relationship with husband, friends, and family plays an important role.
- Flexible line of defense is depicted as the factors which if not present can impair the homeostasis of a postnatal mothers. In this stage availability of support system, knowledge on body image and its maintenance, and strategies to make life a little easier in the postpartal period will maintain the equilibrium of the postnatal mother.

Complementary and alternative therapies on postnatal blues and self - esteem is focused as a primary intervention which serves to prevent postnatal blues, improve maternal self esteem and promotes better bonding between mother and child.

This intervention also facilitates secondary prevention by helping postnatal mothers to realize their own blue feelings and in practicing strategies to overcome the blue feelings.

The postnatal mothers who did not receive complementary and alternative therapies (control group) are shown as high risk group, who have a greater tendency to develop heightened blue feelings which if not picked up early; it can lead to impaired mother – child relationship which in turn leads to post partum psychosis or postpartum depression.[43]



Conceptual Framework Based on Betty Neuman's System Model (1989)

CHAPTER II

LITERATURE REVIEW

This chapter deals with the literature review for the study to evaluate the effectiveness of Complementary and alternative therapies on postnatal blues and self - esteem among postnatal mothers. The task of reviewing literature involves in the identification, selection, critical analysis, and reporting of the existing information on the topic of interest. According to Polit and Beck (2004) researchers almost never conduct the study in an intellectual vacuum. Their studies are usually are undertaken within the context of an existing base of knowledge. Researcher often undertakes literature review to familiarize them with that knowledge base.

For the present study, research and non-research literature were reviewed and organized under the following divisions.

- Literature related to postnatal blues.
- Literature related to maternal self - esteem
- Literature related to complementary and alternative therapies on postnatal Blues and Maternal Self - esteem.

2.1 a. Literature related to Postnatal blues

Motherhood is a rewarding experience. On the other side it is also a challenging one. Postnatal mothers should maintain a balance with multiple roles of parenthood. Maternal confidence is an essential and vital variable which is required for adaptation and maternal adjustment so as to fulfill the maternal role fruitfully. Whereas a low maternal confidence delays the transition to parenthood. This limits the role identity and the satisfaction in the child rearing role. Delivering and having infants with varied behaviours and temperament obstructs the transition thereby leading to depression especially in the first time mothers.[44]

Women's life is threatened by various changes that occur during pregnancy and puerperium such as body image, unconscious intrapsychic conflicts related to pregnancy, childbirth, and motherhood. Pregnant women develop mild psychological symptoms in the puerperal period, which is called as the Baby Blues or postnatal blues or maternal blues or postpartum blues. Globally 2 out of 3 first time mothers experience a letdown feeling called the Baby Blues which affects the mothers emotionally after child birth. Among them 10 – 20 pave way to depression and 1 mother out of 1000 deliveries worsen further to a condition called postpartum psychosis.[45]

Postpartum women in the first week after delivery experience few symptoms such as dysphoria frequent mood changes, depression, crying which cannot be controlled, irritability, anxiety, loss of concentration, confusion, and reduced sleep and rest. These symptoms begin after delivery and may last from few hours to days or even months. Research has shown that it starts immediately after birth and peaks on the 5^{th} day and gradually decreases from the 7^{th} day onwards. Assessment of blues may be done with various blues assessment scale. The assessment using steins scale reported that a score of 8 is indicated as a mood swing occurrence on that particular day.

Though blues can resolve normally without an intervention. It can negatively lead to postnatal depression. Research does not quote that there is any real impairment which results from the Baby Blues. There are no studies explaining the outcome and impact of maternal blues on baby and her family as it affects the relationship with her husband and also with her family members.

The postpartum period is a high-risk time for the least (the blues) and most severe (psychosis) mental disorders. Most postpartum psychotic disorders occur in the first month postpartum; causes for psychotic disorder are psychosocial factors such as stressful life events and marital disharmony that increase the risk for postpartum depression; only first time mothers are risk for postpartum psychosis. Women who have already experienced postnatal disorders earlier in life are at greater or serious mental illness later. Nurses have an important role to play in the preparation of expectant mother for labour and delivery and thus preventing postpartum blues and other postpartum disorders.[4]

Risk Factors / Causes

The transition of parenthood was viewed as a crisis. Usual methods of coping the transition problems often seem to be ineffective. Few parents can become distressed and feel that they are unable to be supportive. Strong emotions such as helplessness, inadequacy and anger that arise when dealing with a baby who is crying.[4]

Rapid changes in the levels of hormones can cause problems during transition of parenthood that is from pregnancy to the non-pregnancy stage. During this phase mothers need insisting care and support from health team members. The health team members particularly midwives should listen to them carefully acknowledge their

feelings provide appropriate practical assistance. Research has proved that the discomfort experienced by the role change attributes to the grief and it is followed by depressive thoughts.[46]

Postnatal blues are caused by major hormonal changes in one's body. But it is not the real proof. Majority of the symptoms such as premenstrual tension, mood lability, as well as menopausal mood swings, are due to the hormonal imbalances. Estrogen levels are depleted after childbirth; this shows that the hormones are the causes along with life style changes after labour and child birth. This inturn increases the stress about the baby, caring for the baby, and the physical discomfort associated with the postpartum commonly the problems associated with breastfeeding and extreme tiredness in the postpartum period for the mother for e.g. when there is no support systems in nuclear families, who has had a cesarean, death of a baby after delivery, or worries of the mother's thinking that how they are going to get things done. They become frightened at the strong contradictory emotions they feel. [6]

Course of illness

A research study by Beck and his associates explored the experiences of blues and depression in Primipara mothers. The women in this study experienced a peak of blues symptoms on the 5th postpartum day. The researchers suggested screening for postpartum blues and continued follow-up for those women with blues symptoms. Crying continously, melancholy, impatience, irritability, restlessness, and anxiety, are the common symptoms of blues and these may disappear, few women go forward and drive towards risk of developing postpartum depression, occurs during the immediate first three days after birth. The reason as quoted by many research findings was hormone related and 80% of the mother's report to have some or all of the above symptoms.[47]

Assessment / Self identification

Maternal blues can be assessed by assessment of maternal / paternal expectations about labour and delivery during the perinatal period. Moreover it includes who will perform the domestic work at home, availability of support, assistance in baby care activities, and mother's usual coping mechanisms for stress and fatigue, has to be identified in the assessment.[48]

Coping with Blues and Treatment

The coping strategies for postnatal blues are that - first of all, one should remember that the blues are normal. The mother should get plenty of rest, and she must use relaxation techniques as much as possible. She should talk to her partner, and she should plan a day out of the house completely. If the postnatal mother is breast-feeding then give her some time to learn about breast-feeding.[49]

The Perinatal Foundation (2004) provided tips for mothers as simple things that a new mother can do to help overcome the baby blues. The tips for new mother include, talking with significant others, singing to relax themselves, cuddle the baby, touch and hold. Spend some time for her every day, smiling at the baby, nutritional aspect has to be considered and should follow a 3 meal pattern which is healthy and balanced diet intake every day. Rest or sleep when the baby is sleeping, doing little exercise for maintaining the body image, take a break from the baby.[50]

Treatment modalities for postnatal blues include rest, all the symptoms, for mild postnatal blues and severe postnatal blues, are temporary and treatable with skilled professional help and support. Postnatal mother especially primi mother who experiences the symptoms of baby blues should have a visit with the health care professional. A medical checkup including thyroid studies and hormonal evaluations

have to be made initially. Once the physiological etiology is evaluated and treated then the mother needs psychiatric evaluation, psychotherapy, and emotional support from a group like counseling and education about the transition to parenthood can be given.[51]

If we feel that baby blues is crawling into new moms the three important keys to prevent and aid in treatment process are rest, exercise, and nutrition. Research has shown that the postnatal mothers who take a healthy and a balanced nutrition, who have adequate rest in between their activities, and who participate in physical exercises had a reduced incidence of postnatal blues. Obtaining a good support system is essential, Family support and maintaining a good relation is vital to provide mothers with time for her. Mothers who have adequate support systems and who engage in discussions regarding childcare and empathy have an outlet for their feelings thereby reducing their vulnerability to postpartum blues.[52]

Maternal Adjustment

Three phases are evident as the mother adjusts to her parental role. These are characterized by dependent behavior, dependent-independent behavior, and interdependent behavior.

Dependent phase

During the first 24-48 hours after childbirth, the mother's dependency needs predominate. To the extent that these needs are met by others, the mother is able to divert her psychologic energy to her infant rather to focus on herself and her nurturing a protective care are required by the new mother. The new mother may require reminders to rest or, conversely, to ambulate enough to promote recovery. Physical discomfort may interfere with the mother's need for rest and relaxation.[4]

Dependent – independent phase

If the mother has received adequate nurturing in the first few hours or days, by the second or third day her desire for independent action reasserts itself. She responds enthusiastically to opportunities to learn and practise baby care, Evans and his associates found that childbirth preparation classes, early contact with the newborn, rooming in, and early discharge are some of the current obstetric practices that seem to enhance taking hold behaviors. Most mothers are discharged home during this dependent – independent phase. Once home, mothers must continue to cope up with physical adaptations and psychological adjustments.

Primi mothers are inexperienced in childcare, as in western culture. Women lack friends, mothers are addictive to substance abuse, and adolescent mothers require more additional support and counseling. The mother may feel that the care given during pregnancy has been deprived or changed. Few mothers also grieve due to loss of mother – unborn child relationship and usually mourn its passing.

Interdependent phase

In this phase, interdependent behavior reasserts itself, the mother, and her family move forward as a unit with the interacting members. The relationship of the partners although altered by the introduction of a baby resumes many of its former characteristics the couple needs to share interests and activities that are adult in scope. The couple may engage in sexual intercourse during the second to fourth week after the baby is born. Some couples begin earlier as soon as it can be accomplished without discomfort, depending on the factors such as timing, amount of vaginal dryness, and breast-feeding status. Some of the new fathers are frank in expressing the jealousy toward the infant because of the observation of the intimate mother infant

relationship. This phase termed as the **letting-go phase,** is often a stressful period for the parental pair interests and needs which often diverge during this period. Mothers and partners should take traditional role in an effort to adapt to parenthood. Both parents should consider themselves equal in child rearing. [7]

The maternal blues or baby blues are very common, affecting 70% to 85% of new mothers. Usually, it begins 3 days after delivery and reaches its peak on 5th day and gradually decreases from the 7th day and resolves by 14 days if left untreated. Postpartum depression is more severe, it affects approximately 8% to 15% of all postnatal women. It may occur any time after delivery; but often it begins 2-3 weeks post delivery and may lasts for a year. When comparing the postpartum psychosis it affects 1 in 1000 postnatal mother. The common symptoms of psychosis during the postpartum period are paranoia, mood lability, hallucinations, and delusions. Often, the delusions focus on the baby being demonic or dying. This requires immediate attention and hospitalization. There is a high rate of infanticide and suicide in affected mothers; therefore, it is of paramount importance that these women receive adequate intervention. The common causes for postpartum depression area mood disorders which may be due to personal or family history of a psychiatric disorder, unwanted pregnancy, complications during pregnancy and labour, reduced or absence of social support, and major life stressors such as a death of a family member or loss of husband, separation during pregnancy. [53]

Physiological basis for maternity blues

A study was undertaken to determine the relationship between mood and concentrations of progesterone and cortisol during perinatal period in terms of maternity blues at the Cardiff Psychological Medicine department of Wales was undertaken among 120 Primiparas from two weeks before expected date of delivery to 35 days postpartum were taken and assessed for their salivary progesterone and cortisol levels. The findings revealed that the changes in salivary progesterone and cortisol concentrations were alike to those already characterized for plasma. 78 mothers were found to have maternity blues and the remaining 39 mothers had no blues. When mother's progesterone levels were compared, the findings suggested that the postnatal women who had blues had higher concentrations of progesterone than the mother's who had no blues. Hence, the mood lability in the immediate period after delivery is related to withdrawal of naturally occurring progesterone. [54]

A study to determine the link between the level of postnatal blues and specific factors like maternal self-esteem, maternal childcare stress and social background, were undertaken in a teaching hospital. Postnatal mothers were recruited before labour and on the third day following birth, data were collected. The data included information such as past medical history and social history and history of previous mood disorders. The tool used was Kennerly and Gath scale, and the social support was measured by Bruchon social support scale. Sample included 95 women. The intensity of the postnatal blues was explained by the type of pregnancy ($p=0.002$), a low maternal self-esteem ($p=0.025$), high levels of stress in relation to the care of the baby ($p=0.074$). The findings also revealed that the postnatal blues was due to physical distress and its intensity is accelerated by psychological factors.[55]

A study to rule out the prevalence of maternity blues and its risk factors involved among Nigerian postpartum women was undertaken by the author on 502 postpartum women who delivered baby through a normal vaginal delivery were selected from in 5 health centers in Ilesa Township. Their Maternity Blues was assessed by Steins blues scale daily until 10th postpartum day. The prevalence of maternity blues was 31.3%, and the symptoms peaked on 5th day postpartum. While discussing about the predictors of maternity blues, frequent mood changes during pregnancy, previous admission and presence of any complications during pregnancy, Gender of the baby particularly female baby in the Indian scenario, and single mothers. The investigator concluded that the prevalence and the significant risk factors for maternity blues vary culture wise and the nurses need to consider the predictors so as to plan appropriate strategies for prevention and management of postpartum blues and postpartum depression in first time mothers.[56]

Psychodynamics of maternity blues

A Study to investigate postnatal blues and maternal adjustment was prospectively conducted among 66 women who were randomly selected in the antenatal period. Mothers completed visual analogue scales postpartum and rated their mood state daily for two weeks after delivery. Dysphoric mood was temporally related to childbirth. Stability of the emotional status was found to be an important affective component during the puerperium. There was a significant relationship between the postnatal blues and maternal adjustment.[57]

Relationship of blues with significant factors

A study conducted to evaluate incidence of maternity blues and to determine the relationship between maternity blues and maternal adjustment, was carried out in Japan. A survey conducted among 417 mothers who gave birth at Nagoya Daini Red Cross Hospital. The tool used was Zung's self-rating depression scale, and a 'postpartum maternal adjustment scale. Analysis revealed that there was a significant correlation between 'maternity blues and anxiety. Maternity blues was an influencing factor in determining the core maternal adjustment and anxiety regarding children. To conclude, the author revealed that the incidence of maternity blues was higher in Japan and there was a significant association between maternity blues and postpartum maternal adjustment.[58]

A study that was done in Japan to investigate the prevalence of post-partum 'blues' in mothers whose babies are cared in a newborn nursery, was compared with mothers providing rooming-in care. 190 Primiparas women were selected for the study and were assigned to newborn nursery care or rooming in care respectively. Stein's Questionnaire and the Edinburgh Postnatal Depression Scale were used to assess the postnatal blues. Ninety seven and Ninety three women were managed by newborn nursery care and by rooming-in care, respectively out of these women, 181 primi mothers were taken for final analysis. 31(33.7%) had postnatal blues, receiving newborn nursery care and in 18 of 89 (20.2%) receiving rooming-in care.[59]

A study to find out the association of maternity blues and self - esteem with obstetric, psychological, and psychiatric factors was carried out on One hundred and six women who were assessed psychiatrically between the 14^{th} - 16^{th} and 36^{th} - 38^{th} weeks of pregnancy and the 12^{th} week after childbirth. They completed a maternity blues questionnaire to assess the blues after delivery. There was a significant

association between blues scores and neuroticism; anxiety and depressed mood. There was a significant association between blues and obstetrical variables such as duration of labour, poor social adjustment. Blues scores were not associated with obstetric factors, such as previous history of psychiatric disorder, previous history of complications during pregnancy, or previous family history of complications during pregnancy.[60]

The move toward the baby blues and mother's depression provides an opportunity for the infant to play a more active role in the relationship, while at the same time enabling him to sleep full nights and allowing his parents to resume the intimate part of their life together. The unexpected arrival of a clear disharmony in the relationship seems to be the best indicator of the two individuals' suffering and of the intensity of the mother's internal psychic conflicts. This intensity precedes the appearance of a depressive syndrome for the mother.[61]

Intervention for maternity blues

A study undertaken to find out the effect of prophylactic information on postnatal blues was undertaken, by the investigator to find out whether information about postpartum blues is effective on postnatal blues. In a prospective randomized study, 169 women were randomized on the second or third day after childbirth. Half of them were assigned to "information group" and the remaining to "control group". The first group was given oral and written information about postnatal blues. The Skillman “Am I Blue?” Questionnaire was used to assess the postnatal blues in both the groups. The findings revealed that 12 (15 %) women of the "information group" experienced Baby Blues whereas 25 (29 %) of the "control group" had blues. Hence, oral and written prophylactic information regarding postnatal blues which was given at postpartum, was an effective therapy to lower the postnatal blues.[62]

A study to determine the effectiveness of a psychosocial intervention - antenatal classes, on postpartum psychosocial adjustment of women and men was carried out. A factorial design was utilized. The subjects were allotted to the Baby play, empathy, or treatment as usual group for the preparation of Parenthood programs. The latter condition controlled for the non-specific effects of the intervention, these being the provision of an extra class; asking couples to consider the early postpartum weeks; and receiving booster information after the antenatal class, and again shortly after the birth. The intervention given to the participants was a session on psychosocial issues for primi mothers. The author stated that postnatal mother's who had low self-esteem, and who received the sessions on psychosocial issues, and classes were significantly better adjusted on mood and a sense of competence than postnatal mother who had a low-self-esteem either of the two control conditions. In men there was an increased level of awareness regarding how their partners experienced the postpartum period after labour and delivery. The effect was only evident for women who, antenatally, reported low self-esteem, is an important advance in our knowledge of the prevention programs. This brief psychosocial intervention can be readily applied to antenatal classes routinely conducted in hospitals or the community.[63]

A study to evaluate the effect of informational education in terms of Postnatal Depression was done in Taiwan. The sample consisted of 500 women who were screened after 4weeks after delivery and 70 postnatal mothers who had a score of more than 10 on Edinburg postnatal depression scale was selected as a final sample. They were randomly assigned to the interventional and the control group. The mothers in the interventional group attended informational education at six weeks after postpartum and the control group received usual care alone. The tool used was

Edinburg Postnatal Depression scale. Both the interventional and the control group were assessed by the EPDS at three months postpartum to find out the depression status. The findings revealed that the Taiwanese women who received informational support about postnatal depression six weeks after giving birth to experienced lower EPDS scores at three months postpartum than those who did not receive this information. Hence, a prophylactic information provided during the postnatal period regarding postnatal depression improves the psychological well-being of the postnatal mothers.[64]

A transverse study to assess the risk factors which predicted the occurrence of maternal blues among the postnatal mothers in a corporate hospital in mallapuram district kerala was carried out. A sample of 400 primi pregnant women was selected as sample in the last trimester. The postnatal blues was assessed by maternal self report inventory on the 5th day postnatal period, and life events were measured by using Holmes life events scale on the 5th day. The analysis reported that 68% of the postnatal mothers had postnatal blues. While comparing the risk factors for blues; the odds ratio reported that single mothers, poor support system, reduced rest and sleep, earning mothers, mothers who had menstrual disorders before pregnancy, gestational diabetes, previous family history of problems during pregnancy were the factors to predict postnatal blues. Hence postnatal mothers who had higher maternity blue scores are vulnerable for postnatal depression either immediately or in the subsequent pregnancies.[65]

Factors Affecting Maternal Adjustment

Discomfort

Discomfort associated with childbirth such as perineal pain or after pains; resolve with in the first day following birth. Fatigue often remains as a problem during the first week after delivery

Knowledge of infant needs

First time parents are unsure of how to care for the newborn and become very anxious if they are unable to console a crying infant. Certain specific procedures such as cleaning of the umbilical cord or circumcision. They want to know that whether the infant is getting adequate nutrition. It is important that responding to infant cries does not spoil the child. Prompt gentle response helps him or her to develop a trust that the world is safe, secure place.

Previous Experience

Previous experience with the newborn may also affect family adjustment. As expected multiparous are more comfortable with the infants and exhibits attachment behaviors earlier than do Primiparas who may spend many more hours in the discovery phase.

Mothers who have previously given birth to infants with anomalies or infants who did not survive may need more time to feel comfortable with this infant.

Expectations of the New Born

Unrealistic expectations of the infant may also influence adjustment. The mothers are unprepared for the normal characteristics of new born, such as cranial moulding, blotchy skin, blue hands and feet. They may have anticipated that the infant would be

able to smile and would sleep through the night. Teach normal growth and development and assist the parents in working through their misconceptions. Some of the mothers may be disappointed with the sex of the child.

Maternal Age

In general, teenagers tend to talk less, respond less, appear more passive, moreover, sometimes appear less affectionate with their children than the adult parents. Clearly, teenage mothers and fathers need special assistance to develop necessary parenting skills that promote optimal development of the infant.

Maternal temperament

Maternal personality traits are a major influence on attachment. Mothers, who are calm, secure in their ability to learn, and free from unnecessary anxiety adjust more easily to the demands of mother hood. Conversely, mothers who are excitable, insecure, and anxious have more difficulty. Mothers who are aware that it takes time for the body to return to its pre-pregnancy weight and who do not insist on rigorous dieting or unrealistic exercise regimens adjust more easily.

Temperament of the infant

Infants, who are calm, easily consoled, and enjoy cuddling, increase parental confidence and feelings of competence. Conversely, irritable infants who are difficult to console and who do not respond to cuddling increase the parental frustration and interfere with adaptation.

Availability of strong support system

A strong support system is a major factor in adjustment of the new mother. She needs assistance in household tasks such as meal preparation, laundry, and shopping. In addition, she needs encouragement, praise and reassurance that she is a good mother. [66]

A study to identify the incidence of psychological disorders in women from 3 to 5 days after delivery and to find out the acceleration of maternal blues by the socio demographic, psychiatric and obstetric factors on both the incidence and the prevalence of maternity blues was undertaken among the postnatal mothers. A sample of 350 postnatal women between 3rd and 5th day of puerperium were selected and asked to fill in a questionnaire. The tool used was EPDS. The final sample size was 344 after the data collection and 6 did not return the questionnaire. The findings revealed 32% of the postnatal mothers had maternal blues. The educational status of the mother, lack of family support, presence of complications during pregnancy, and patient's previous history of depression or mental illness had a strong relationship postnatal blues. Apgar scores of the babies did not show any difference but every third mother was at risk of developing maternity blues.[67]

A study to determine the relationship between labour pain and mood disorders in the postnatal period was undertaken on 43 women at three days postpartum in a maternity unit in Toulouse. The mean age of the postnatal mothers was 30 yrs (S.D., 4.8 years; range, 18-39 years). Only French speaking mothers were recruited for the study. The mothers were excluded if the mothers had past psychiatric history or if they delivered a preterm baby, ill, or stillborn. Pain was measured using McGill pain questionnaire and blues assessed by Kennerly and Gath maternity blues questionnaire. The findings suggested that there was a statistical significant positive correlation

between the pain and the maternity blues on third postnatal day. The author also quoted that there was a stronger association between postpartum blues and affective aspect of childbirth pain. Depressive mood was found to be associated with affective aspect of the postnatal mother. Hence, maternity blues is a strong predictor of postnatal mood disorders and mental illness among the postnatal mothers in the immediate postpartum period.[68]

A study to investigate whether occurrence of postpartum blues was in relation to the changes in the levels of noradrenergic and serotonergic functioning was undertaken on 26 healthy pregnant women. Heamogram was assessed at labour, on 5th postnatal day and 6 weeks after delivery. Blues was assessed by using the Kennerly and Gath blues questionnaire on 5th day and EPDS after 6weeks of delivery.

The findings suggested that 80% of the postnatal mothers had postnatal blues. The tryptophan ratio and serotonin content of platelets were decreased ($p < 0.01$) on 5th day. Increased Serotonin levels were found due to higher paroxetine binding to platelets. This is the likely cause for the onset of postnatal blues. Postnatal mother's who were at stress and decreased coping of stress were at risk for developing blues and move towards postpartum depression due to elevated MHPG levels in women during stressful periods. Among the mothers who had postnatal blues 15 – 20% moved towards postnatal depression.[69]

A prospective study conducted to find out the potential bio-psychosocial factors causing baby blues was tested among 182 women. The subjects were followed from the second trimester of their pregnancy till the first week of the postnatal period after delivery. The data regarding personal and family history of stressful events, depressive symptoms, stressful events, and ways of coping along with social adjustment were assessed. In the second trimester the levels of progesterone,

prolactin, estradiol, and free and total cortisol were measured on several occasion during late pregnancy and early puerperium. The findings suggested that child care stressors, body image disturbances and the serotonin levels and free estradiol levels had an impact in developing the Baby Blues among the postnatal women. It was concluded that the postpartum blues is within the spectrum of affective disorders.[70]

A quazi - experimental posttest only design study done to evaluate the effect of prophylactic information on maternal adjustment in terms of postnatal blues was carried out among the postnatal mothers admitted at a selected hospital in Madurai. The sample consisted of 60 postnatal mothers (30 in the interventional group and the remaining 30 in the control group). The interventional group received prophylactic information on postnatal blues along with routine care whereas the mothers in the control group received only the routine care. The tool used to assess the postnatal blues was "Am I Blue?" questionnaire by N.J. Skillman. Postnatal blues was assessed on 7th postnatal day for both the groups. The findings of the study revealed that the postnatal mothers in the interventional group had mild blues whereas a larger percentage of the control group had moderate to severe baby blues. There was a significant association between the modifying, non - modifying factors and the level of blues. Thus prophylactic information was effective in improving the maternal adjustment and inturn reducing the Baby Blues.[71]

2.1 b. Literature related to Self - esteem

Self-esteem is frequently described in terms of evaluative attitudes. Self-esteem is the appraisal of oneself where the client or an individual maintains an image or regard about himself. The percentage of his approval in attaining the regard considered to oneself. It is also defined as a person's self worth or self - judgement or self evaluation. (Rosenberg)

Self-esteem is defined as how worth the individuals place on themselves. It is an appraisal part on their self-knowledge. An individual who has High self-esteem indicates a high evaluation of the self whereas an individual having low self-esteem lead to unfavourable evaluation of the self and may create problem in self. It is the difference between the individual's perception and the self evaluation. Krueger & Vohs, 2003).

According to Pavur and Little (1981) self-esteem is the evaluative attitude regarding one's self worth as a person in a variety of situations. Mussen et al. (1984) distinguish self-esteem from self-concept and indicated that self-esteem is different from self-concept, as both the terms are often confused. The self-concept is the mental image or perception about oneself and is usually descriptive rather than judgmental, whereas on the other hand self-esteem refers to one's evaluation of his / her own qualities. Researchers like Bee (1992), Santrock (1994), Zigler and Stevenson (1987), and Sprinthall and Collins (1995) agree that self-esteem is the evaluative and affective dimension of self-concept. Self-esteem also **is** referred to as self-worth or self-image. It is also defined as "the extent to which one perceives oneself as relatively close to bring the person one wants to be."

High self-esteem is a gift which helps the clients to boost their attitude about oneself and thus inturn will suffer less or to get well faster after tight corners and stressful life events. People with high self-esteem are usually engaged in healthy behaviours, they can cope better during stressful life events, they usually perceive more social support, and are more satisfied with their availability of social support and positively use the available resources. All of these variables contribute to less stress and increase in psychological well-being, which can contribute to fewer adverse pregnancy outcomes.

People who have low self-esteem complain more about negative social relations, their stressful life events cannot be coped up, and have less support system compared to those clients with high self-esteem. Individuals with high self-esteem can manage stressful situations better than those with low self-esteem. Hence the people with high self - esteem can cope up stress in a better way and lead a stress free life always. But remember that self-esteem is not an etiological factor for stress or any untoward relations but it is usually surrounded with the other factors which affects the person's relationships.

Self - esteem has been reported by many investigators as a psychological response. Rogers (1950) describes acceptance of self as a tendency of the client to think himself as a person of self worth, the client has a worthy of respect and not a worthy of condemnation. Rosenberg (1965) also quoted in his previous articles that people with a high self - esteem express a feeling of self satisfaction and has a concept of worthiness, whereas a person with a low self-esteem on the other hand has ideas of worthlessness, hopelessness, self-dissatisfaction, withdrawal from self and society, and self- rejection. According to Folkman and Johnson (1996) self-acceptance refers to the individual's evaluation of his self-concepts and his coping-abilities, and correlates with basic self-esteem.[72]

Adolescence is a wonderful period in one's life and also a period of struggle in maternal role identity. Adolescents may experience many social, emotional, physical, and cognitive changes. Research shows that except in the early adolescent period psychosocial disturbances does not occur among the adolescents.

In another summary of data by Wylie quotes that there was no relationship between self-esteem and age. This was congruent with other findings such as that adolescence is not a time of major self-esteem disturbances. More recent studies offer further support which were congruent with this findings "increases in self-esteem between the ages of 15 and 23". The data suggests that the variation experienced during adolescence is a continuous phenomenon and not a disruption of development.

When the adolescents have a positive sense of self worth and a basic sense of continuity of self, they will be ready to move forward towards succeeding in the psychosocial stages (Erikson, 1963). Then they fore see their psychosocial energy on intimacy formation and share themselves with another person. This inturn maintains the identity of the adolescents. Once their identity and intimacy have been achieved, the adolescents then enter into the generativity stage of parenthood. .

In a survey conducted among the adolescents in 2011, to find out the incidence of adolescent pregnancy by Ventura revealed that 115 in every 1,000 adolescent females became pregnant between the age of 15 and 19. In the above said statistics approximately 90% of African-American women and 54% of Caucasian women became pregnant without getting married. This high rate of pregnancy among adolescents is especially alarming as the adolescents have to deal with the stage of generativity before they are ready. Hence, the adolescents had to resolve the stages of development because they have not got the opportunity to resolve the stages of role identity. Their emotional development is delayed leading to problems in emotional stability and mood lability; it also places their children at risk because they are not developmentally capable of dealing with the demands of parenting.

Chase-Lansdale (2012) also supports this notion and argue that when the women become pregnant in the adolescent stage the development of their sense of self which is autonomous is hindered. The babies which are born, experience few changes such as separation from their mothers and formation of other intimate relationships, in addition, the transition to pregnancy and parenthood becomes difficult and tiresome. The perception about pregnancy among the adolescents may influence the health and well-being of their babies.[73]

Ways to cultivate a healthy self-esteem as a mom.

1. **Maintain cordial relationships:** A cordial relationships with the husband and the family members including friends will lead to healthy behaviours of adaptation and improve their self-esteem. The relationship with elders and experienced persons will aid in mentoring and help to uplift the children's lives.

2. **Personal development**: The mother will have to spend time for herself and allocate some resources for her wellness. She has to use the time for activities such as exercise for maintaining body image, reading, relaxing, to get rid of the tension mounted within her. When time is spent for these activities the mother will have ample time to care for her children.

3. **Life management:** As there are many individuals in the family, there may be confusion in carrying out the household work, as the mother is the centre of all the work to be carried out in the home, particularly in nuclear families where no help is available, hence an order has to be created to get help from significant others in sharing the responsibilities. Create a method that allows each person to know what is expected and when it needs to be done. Planning and getting help for household work is effective for smooth running of the family, which will help the postnatal mothers to feel good about one self.

4. **Develop significance:** Few mothers may be working and some others may be homemakers whoever it is, the postnatal mothers after delivery think that they have little significance for them. So we need to develop a sense of significance for the postnatal mothers. Each season of life brings new needs. Look for ways that you can be involved in an area of your passion. Hence, the mother's involvement either simple or an extensive one will change lives or this inturn will influence how one see's one self.

5. **Develop dreams and passions:** Dreams have the power to change the world. As mothers are often busy in meeting the needs of the baby, fulfilling the needs of the people around her. Take time to reflect on the child hood memories and incorporate the memories in developing dreams and begin to pray towards seeing these dreams become reality.

6. **Take time for fun and laughter:** Few things such as laughter and the fun around the postnatal mothers make oneself feel better. The family has to support and beam the mothers to play and laugh with them irrespective of the age. Plan for activities that will completely take the postnatal mother out of the household activities.

7. **Allow God to empower you as a mother:** God is the ultimate power to offer you, discernment, sensitivity and wisdom. As one prays to and seeks god, he will provide the resources to cope up with the trials and tribulations during the tight corners one is in. He cares more about oneself and their babies.[74]

Transition to Parenthood programmes are used at a higher rate to bring about a well being of the postnatal mothers and their babies. A total of 26 studies was established for the study. The 26 studies consisted of 64 assessments regarding maternal health during the postpartum period. The variables included were self - esteem, anxiety and postnatal depression. The analysis of the combined data shows that the transition to parenthood programs were effective in improving the maternal psychosocial functioning among the postnatal mothers. All the studies have proved that this intervention reduced the anxiety and risk of postnatal depression and increased the self - esteem scores of the postnatal mothers.[75]

Though maternal self - esteem is an important theoretical concept, little is known about the development of maternal self-esteem. A study to explore the risk factors and its impact on maternal self - esteem during pregnancy was undertaken among 162 primipara women. All the subjects completed the self - esteem measures assessing their unhealthy core beliefs, psychopathological symptoms, and self-esteem. Again at 1 yr after delivery, data such as self - esteem and child's temperament was collected from 87 women who were available. The findings of the analysis revealed that maladaptive maternal core beliefs and psychopathological symptoms during pregnancy were the predicting factors in maternal self - esteem. Forty-two percent of the variance in maternal self-esteem at 1 year could be explained by a combination of prenatal maternal self-esteem, mental health symptoms, maternal core beliefs, and more unsociable infant temperament.[76]

Maternal self-esteem is examined from theoretical and clinical perspectives. The construct of maternal self-esteem is described, and infant and maternal factors affecting it are delineated. These factors include infant health, maternal perception of infant health, and newborn characteristics. Particular emphasis is placed on maternal

perception of the infant's health and behavior. The preterm infant within the context of the special care nursery is used as a clinical illustration, thus bridging the gap from theory to clinical practice. General unit guidelines and clinical intervention strategies, are the helpful guidelines which can be provided to improve the self - esteem of the postnatal mothers who had given birth to preterm babies.[77]

A study which analyzed the self-esteem and associated factors in parturient women was done at Unified National Health System, using a cross-sectional design on 560 parturient were undertaken. The subjects were interviewed for 7 months consecutively. The setting of the study was specific locations like University outpatient clinics and hospital wards. The data were collected by using Rosenberg's self - esteem scale. The findings revealed that 62.9% were considered as high-risk pregnancies with proven complications. Mean self-esteem according to the Rosenberg scale was 9.2 with a standard deviation of 4.6. There was a significant positive association between the level of self - esteem and variables such as age, schooling, and income. It was interesting to note in contradiction even the high-risk parturient showed higher self-esteem than low-risk parturient women.[78]

A study, evaluated the effectiveness of guided imagery on self - esteem among postnatal mothers were undertaken at Govt Rajaji Hospital, Madurai, among 60 postnatal mothers. The subjects were assigned randomly into the interventional group and the control group, 30 in each group. The mothers in the interventional group received guided imagery intervention for 20 minutes, twice a day for 5 consecutive days along with usual care and the mothers in the control group received usual care alone. Self - esteem was assessed on 5th day for both the groups with maternal self - esteem scale. The analysis revealed that the level of self - esteem was higher among the postnatal mothers in the interventional group when compared with the control

group. There was a significant association between the level of self - esteem and educational status, duration of stage of labour, presence of complications during pregnancy. The author concludes that 10 sessions of guided imagery improves the self - esteem among the postnatal mothers and guided imagery can be used safely in Indian Scenario.[79]

The purpose of this study was to examine the process of maternal adjustment for a sample of late-timing primipara mothers. This developmentally rooted short-term longitudinal study used both quantitative and qualitative methods. Twenty mothers, who were 29 yrs and above were interviewed during the 8th month of pregnancy and again at 2months postpartum. Measures of social support were administered in the prenatal period, and again in the postnatal period, along with measures of maternal self-esteem and infant temperament. Observations of mother-infant interaction and the home environment were done at 2 months. They had positive prenatal attitudes about motherhood and demonstrated average or higher levels of maternal self-esteem. They were satisfied with the support they received, and did not feel isolated. They found their infants adaptable and unpredictable, but not difficult or dull. They were sensitive and responsive to the needs of their infants. Results also show that maternal adjustment was influenced over time by prenatal attitudes about motherhood, infant temperament, maternal self-esteem, and the quality of the care giving environment provided by the mother.[80]

Becoming a parent introduces greater number of new roles, stressors, and demands on the individual. Predicting mothers' self-efficacy as well as their energy in the parental role was the goal of the current study. A cognitive behaviour therapy with massage was used to identify the effect of it on maternal self - esteem. 170 primi mothers were selected for the study and were grouped by random assignment into the

experimental and the control group. Participants in the experimental group underwent cognitive behaviour therapy along with massage for the first week whereas the participants in the control group received only routine care. Data were collected using maternal self report inventory and the results revealed that the cognitive behaviour therapy group had improved self - esteem than the control group. Results suggested that the postnatal mother's current exercise level and overall physical activity level directly predicted maternal self - esteem.[81]

A study using a quazi - experimental – pretest and posttest control group design was carried out among primipara mothers. The sample consisted of 60 first time mothers who were selected conveniently and were divided into the experimental group and the control group. The experimental group received relaxation with guided imagery for 4 weeks and the control group received only the routine usual care. Maternal self - esteem was assessed by maternal self report inventory; maternal blues was assessed by steins blues assessment questionnaire, anxiety was assessed by Hospital Anxiety Index and depression by EPDS at one week after delivery and after 4 weeks of the postpartum period. The results showed that the experimental group had lesser maternal blues, lesser anxiety, lesser depression and a greater self-esteem than did the control group at the end of the period.[82]

A controlled study on fifty-five women was done to seek the effects of imagery on self - esteem, breast milk production, and anxiety among the first time mothers was carried out in a selected maternity centre at Minnen. The subjects were assigned conveniently into the experimental group (26) and the control group (29) the experimental group received a 15 minute audiotape of guided imagery and followed by meditation for 5 days. The tool used was a Craigs self - esteem scale, and state trait anxiety index.

The data were collected immediately at birth and on the 5th day postpartum. The results suggested that there was a greater scores of self - esteem in the experimental group then the control group. Anxiety was reduced and milk secretion was increased in the experimental group as compared to those receiving only routine only.[83]

The present study was designed to test hypotheses relating eight maternal attitudes and behaviors to the self-esteem and overall adjustment of children with birth defects. To test these hypotheses, 35 pre- and early adolescent children with birth defects and their mothers were selected as sample. They were assessed for the aspects by various questionnaires. The findings supported the set hypotheses for 5 out of the eight maternal attitudes. (a) Presence of any congenital abnormalities of the child (b) Discussion regarding the baby care which needs a good communication. (c) self worth for the child, (d) a positive accepting outlook towards the child's future; (e) motivation and encouragement for the child's independence, dependability and good achievement.[84]

A study to evaluate the effectiveness of guided imagery in terms of self - esteem and stress, and sleep quality among the postnatal mothers at Maruthi Hospital Trichy, was done among 60 subjects. The subjects were allotted conveniently to the experimental and the control group. (30 each in the experimental and control group). Guided imagery was given 20 minutes thrice a day for three days for the mothers in the experimental group and the control group received only routine care. Self - esteem was assessed by maternal self - report inventory, stress was assessed by Holmes and Raage perceived stress scale and the sleep quality was assessed by Groningen's sleep quality scale. Data were collected at birth and on the 4th day morning. The findings suggested that stress was reduced; sleep quality and self - esteem improved among the postnatal mothers in the experimental group who practised guided imagery than the postnatal mothers in the control group.[85]

Blues and self-esteem are interdependent on each other as quoted by many researchers. Research has shown the impact of self-esteem on the Baby Blues. Studies have suggested and supported that the Baby Blues has a negative impact so as to decrease the maternal self - esteem of the postnatal mothers.

The author has analyzed 95 studies on blues and self-esteem and experimented at the vulnerability or risk factors of each symptom and assessed the impact they had on each other and vice versa. After the analyses the author revealed that there was a strong relationship between self-esteem and postnatal blues at the same time there was no significant relationship between depression and self-esteem among the postnatal mothers. He also proved that a decrease in self-esteem was the predictive factor for the increase in baby blues. In conclusion the author quotes that relationship was reciprocal, with both self-esteem and blues negatively affecting each other in similar ways.[86]

A study to evaluate the effectiveness of guided imagery in terms of pain and postnatal blues, and self - esteem among the postnatal mothers undergoing Caesarean section at N.S. Hospital arumuganeri was done among 60 subjects from a maternity surgical department. The sample was selected by purposive sampling (30 each in the experimental and control group). Guided imagery was given by using sound with the help of walkman and visual stimulation with the help of pictures for 15 minutes three times a day for three days. Mc Gills pain questionnaire and Skillman Blues questionnaire were used to collect data on pain and postnatal blues at birth and on the 3rd day. The findings suggested that there was a significant difference between the mean perception pain score among the patients in the experimental and control group. There was a reduction in the postnatal blues scores. There was a significant association between the level of pain and age.[87]

Maternal personality characteristics influence cognitive development is a known hypothesis. Children have been grounded in stress moderation theory. Self - esteem lead to good parent – child bonding and uplifts the mother – child interaction which in turn has an impact on the child's Neuro development. This suggests that mother's personality can bring an effect on Neuro toxicants.

A study to explore whether mothers' self-esteem had a direct effect on their children's behavioural and cognitive outcomes was undertaken at a maternity centre in Douglas. A sample of 92 mothers was randomly selected and their maternal self - esteem, child's cognitive outcome was collected by Coopersmith Self-Esteem scale, children's Bailey's scale of infant development. Data were collected at birth, after four weeks of child birth, at six months, at one year and at three years. The findings revealed that there was evidence showing that maternal self-esteem attenuated the negative effects.[88]

A pilot study to examine the variation in pain, labour outcome, and self - esteem was carried out with an aim of testing the effectiveness of mental imagery interventions was carried out among hospitalized primi postnatal mothers. The variables used in this study were pain during labour, and to assess (cognitive ability, outcome expectancy, previous experience, and concurrent symptoms) on pain relief achieved. The sample consisted of 40 postnatal mothers who were hospitalized. The participants in the mental imagery group underwent 14 sessions of mental imagery along with usual care and the control group underwent usual care only. The data were collected on 5th day with numerical pain rating scale, labour outcome checklist, and Rosenbergs self - esteem scale. However, the findings suggested that in the interventional group only half of the participants achieved a reduction in pain with each intervention. Labour outcome was good in the experimental group and also this

group achieved a greater self - esteem than those who did not undergo mental imagery. The author also concluded that the investigators should continue making efforts to identify factors that moderate the effects of mental imagery.[89]

A study to understand the impact of psychosocial interventions on postnatal blues, maternal self - esteem and parenting styles among post partum period was undertaken at Children's National Medical Center, Washington was undertaken. The author used an experimental pretest and posttest control group design. The sample consisted of 120 postnatal mothers who had given birth normally; they were allotted to interventional group (60) and to the control group (60) randomly. The tool used was Craig's maternal blues scale and Shea and Tronic maternal self - esteem scale, and a functional well being parenting questionnaire. The mothers in the interventional group were given 30 minutes of psychosocial interventions for 2 weeks post partum along with routine care whereas the control group did not receive any intervention. Pre - intervention assessment of the maternal blues, self - esteem, and maternal parenting styles were assessed on 3rd day, and 5th day. The post - interventional assessment was done at 1st week, and at 14th day post partum. The findings revealed that the maternal blues scores were reduced in the interventional group than the control group, self - esteem scores increased in the interventional group then the control group. When comparing the parenting styles; maternal warmth, sensitivity, co-parenting relationships were found to be good in the interventional group than the control group. The author concluded that psychosocial interventions are effective in reducing blues, improving the self - esteem, and improving the maternal parenting styles. The younger postpartum mother is at more risk for baby blues, low self - esteem, and maladaptive maternal parenting styles.[90]

An exploratory pilot study was undertaken to examine the relationships among adolescent mother-infant interaction, maternal self-esteem, and parenting stress, which affect child development, in order to make recommendations for helping Japanese adolescent mothers in parenting. The sample consisted of 10 adolescent mothers and their infants aged 3–12 months (adolescent group) and 10 mothers whose mean age was 28.9 years, the same age range when Japanese women gave birth to their first baby (comparison group). The study examined differences in mother-infant interaction, self-esteem, and parenting stress between the adolescent and comparison groups. The author revealed that maternal self-esteem had a significant negative correlation with mother-infant interaction and parenting stress. The study suggested that adolescent mother-infant relationship has a positive correlation of maternal self-esteem and parenting stress, informing recommendations for nurses to replace their negative self - image of these youth with a positive one, which may ultimately lessen parenting stress.[91]

2.1 c. Literature related to Complementary and Alternative therapies on postnatal Blues and Self - esteem.

The world in the medical field has seen enormous and dramatic changes in the treatment of various disorders without any adverse effects and moreover which are cost effective. They are the use of complementary and alternative therapies. Still we don't know much on how to use these therapies effectively. There is little scientific justification to support the use of the alternative options, and these treatments are like ready reckoner both to the public as well as to the CAM professionals.

Majority of the people have been choosing on dietary supplements, which has increased the scope and the utility of CAM therapies in the recent era for more than 20 years but this is practised without the consultation from the concerned CAM physicians. It is of great importance to delineate how CAM physicians ascertain that alternative treatment modalities are appropriate. They also ascertain factors/symptoms in depressive illness that are most relevant when choosing from a myriad of treatment options available.[92]

Complementary is a word which describes something which is used 'in addition to', and 'alternative' is one that is used 'instead of' something. Hence, Complementary therapy is a therapy which is used for a client in addition to the routine or usual treatment methods for various reasons. CAM practitioners may be doctors of conventional medicine or may be doctors of any of the alternative medicine practitioners. The National Centre for Complementary Alternative Medicine has classified CAM treatments into seven types and they are (1) alternative systems of medical care; (2) bio - electromagnetic therapies; (3) diet, nutrition and lifestyle changes; (4) herbal medicine; (5) manual healing methods; (6) mind–body medicine; and (7) pharmacological and biological therapies. Hence, complementary therapies

also incorporate dietary changes, herbal therapies, energy healing, touch therapy, hypnosis, acupuncture, spinal manipulation, animal-assisted therapy, physical medicines, and so on.

Ayurveda: It is an ancient system of medicine developed in Indian subcontinent 5000 years back. It takes into consideration the body, mind, and spirit and restores a natural holistic well being of the client. A patient's constitution of the physique and body system is divided into either Vata, Pitta, or Kapha and these metabolic body types become the baseline data for planning a specific treatment plan which inturn brings back the individual into a harmony with the surrounding environment.

Conventional medicine: Medicine which is practised by holders of medical doctor degrees such as M.D, MBBS, and so on along with the allied health professionals, i.e. physical therapists, psychologists, and registered nurses. This conventional medicine is also called as allopathic, western, and regular medicine. Few conventional medical practitioners also practice CAM so as to accelerate the healing process and to minimize the side effects.

Dietary supplement: Any product which is ingested and intended to supplement the diet and other dietary ingredients to supplement for health. The dietary ingredient may include products, such as vitamins, minerals, amino acids, and enzymes. It can be in any form not only in the form of diet but also in the forms of medicines. Dietary supplements are heterogeneous products; which consists of many types of ingredients from which numerous forms of other products are made.

Naturopathic Medicine: It is a combination of traditional therapies with the most advanced therapies used in today's world. [93]

Complementary and Alternative Medicine Use today

Though the complementary and alternative medicine has been used since long time, it did not gain its scope until recent times. As the traditional and the conventional medicine forms had adverse effects over the clients as well as the cost for the conventional medicine also is huge slowly the physicians turned and looked around the use of complementary therapies. Modalities such as botanical medicines, lifestyle, nutrition, and acupuncture had a major role in the treatment of mood disorders and depressive illness. The statistics from the CDC had revealed that 62% of the adults practised some form of complementary therapies. The commonest ones practised were deep breathing, relaxation, yoga, massage, imagery, and meditation. The Complementary alternative therapies were commonly used in conditions such as Pain, anxiety, depressive symptoms such as postnatal blues, back pain, neck pain or neck problems, and joint pain or stiffness.

32 percent of the clients surveyed by using CAM for which they were seeking the physicians. It was Interesting to introspect that 40% of these people informed the physicians about the usage of the CAM and the rest of the clients did not inform their physicians that they were using CAM therapies.

The selection of CAM therapy is population-dependent and it depends on age of the client, the illness or underlying medical condition, and the area of living of the client. A study done among the elderly living in a selected old age home on the usage of complementary therapies was undertaken on 655 elderly who did not have any chronic medical disorders. Out of 655 subjects 30% used some forms of complementary therapies. Among them majority 37% of them used relaxation strategies 34% used imagery and hypnosis, and 29% of them used herbal therapies

and acupressure. The reasons for the use of CAM among elderly may be due to the educational status, increased access, and a willingness to try other modes of treatment.

Literature supporting the use of alternative therapies for mild-to-moderate blues has been studied. The use of CAM in the postpartum mood disorders is more common as the published research findings support the use of CAM. Although many of the therapies are said to benefit blues, the therapies such as relaxation hypnosis, imagery, appear to be safe, as it has no adverse effects, on the other hand it is important to note that serious neuropsychiatric side effects and interactions have been reported in conventional treatment. Although many CAM therapies for blues are probably safe and effective; more research is required to understand their mechanisms of actions and to understand whether the placebo effect plays a role in these treatments.

Another study quotes that the use of CAM may be an indicator for the underlying psychological stress among patients; and the findings revealed that 32% of women with breast cancer used CAM therapy to reduce their pain level and to decrease their depressive symptoms.[94]

CAM Research and Practice

CAM is an important and different approach towards health and healing which comprehensively addresses promotion of the health of the client and is not for the temporary relief of the symptoms of the particular disorder or disease.

A study to compare the efficacy green tabs to the old conventional antidepressant medication was carried out in a city medical center; Aluwiruas among 220 patients with mild to moderate depression were taken as sample. The findings suggested that when the patients were given green tablets i.e. herbal therapies their

depressive symptoms reduced considerably than the patients who took conventional medicine. But it can also have a negative phenomenon that the green tablets may be a symptomatic one and not a curative one.

Exercise

Throughout history, from the olden days exercise has been used in preventing illness as well as promoting health and well being. It has been practised and used in many societies, ancient and modern. It is the most beneficial form of therapy for baby blues i.e. activity and rest, as exercise reduces the mood swings and improve the prognosis in affective disorders. It also balances the cholesterol levels in the blood, improves cardiac function. There is a lot of evidence that exercise is beneficial to mental health, for it reduces anxiety, blues, and negative mood, improves self-esteem and cognitive functioning.

A randomized control study conducted on 156 postnatal women moderate to severe blues were assigned to a 4- week course of exercise, and the other group was given sertraline therapy. After four weeks the mothers in both the groups exhibited significant improvement. In due course, after long time over 6 months and 1 year the postnatal mothers in the exercise group had significantly lower relapse rates ($p = 0.01$) than subjects in the sertraline group. In the exercises group the post natal mothers had reduced blue scores which was assessed on day three and day five post partum.[95]

Aromatherapy

Aromatherapy is a type of complementary therapy which is practised by using essential oils to extract the therapeutic benefits of the plants from which they are grown. These essential oils are used in the process of relaxation and to act on the symptoms present in the individuals.

Tiran in his study mentions that the oils most commonly used for mood disorders are lavender, jasmine, ylang-ylang, sandalwood, bergamot, and rose. Many of this oil have relaxation effects in them; hence, it is a natural relaxant in stress. They also have narcotic and hypnotic actions as the aroma can cause central nervous system depression. Lavender pillows, lavender scent are other modes of lavender preparations which can be used in individuals for disorders such as sleeplessness, anxiety, for increased arousal of concentration. Though there is no strong support for the usage of aromatherapy for postnatal mood disorders; research reports that it can be used to reduce the symptoms related to postnatal blues. It can also used as an adjunct with massage therapy to reduce friction and to improve the comfort while massaging.[96]

The role of alternative medicine in treating postnatal blues

Baby blues is an alarming state which produces a worst and sick condition. As mental illness is a branding or a social stigma in Indian scenario the postnatal blues are under reported and majority of them think it is normal and do not seek medical help. Ravija has revealed that in Indian scenario many interventions are available for use in postnatal blues such as Herbalism, homeopathy, aromatherapy, massage, hypnosis and traditional Chinese medicine. All of the above interventions except the Chinese medicine all other therapies are said to have an evidence base for its usage.[97]

The advent of the new health care resources for various disorders aid in evidence based practice and all of these disorders or the severity of the symptoms can be prevented at the first stage as a primary prophylaxis. Acupuncture, medication, herbalism, and guided imagery are included in a list of therapeutic modalities designed to augment traditional care. By providing such complementary therapies to such clients with mood disorders of the post partum period can improve and boost the physical and mental health of the client thus optimizing the longeveity.[98]

In a study to rule out the percentage of women practising complementary therapies after delivery and child birth was conducted at Bengaluru in the mid 2010. A sample of 1200 subjects was selected conveniently over a period of 6 months. A survey questionnaire was answered by the postnatal mothers regarding use of complementary therapies after their delivery and child birth. Regression analysis showed that majority of the postnatal women 63% had the knowledge regarding complementary therapies but only a meager percentage of them 27% used some form of complementary therapies and it was mainly to relax and to regain their body structure. Remaining 10% were not aware about the complementary and alternative therapies. The use of complementary and alternative therapies for blues is an issue of growing interest for practitioners who care for women. Though there is availability of information from various sources, women may be using these therapies inappropriately.[99]

To determine the prevalence and types of complementary and alternative medicine therapies used by certified nurse-midwives in North Carolina, a survey was carried out among 120 Nurse-midwives in North Carolina. As they requested for information concerned about their recommendations in using complementary and alternative medicine for parturient mothers.

A sample of 82 Nurse Midwives were selected conveniently from a base hospital in North Carolina. Data on recommending the complementary therapy were collected by a questionnaire and 82 responses from the Nurse Midwives were received. Analysis revealed that 93.9% recommended complementary and alternative therapies to their parturient mothers in the last year. 57.3% reported recommending complementary and alternative medicine to more than 10% of the total parturient mothers. 73.2% of the Nurse-Midwives recommended herbal therapy, 67.1% recommended massage therapy, 57.3% recommended prayers, 48.8% recommended MBT, 32.9% recommended aromatherapy, and 14.6% of them recommended bioelectric or magnetic applications. The common reasons for prescribing complementary therapies were labor stimulation, perineal discomfort, postpartum blues, postpartum hemorrhage, and complications of pregnancy, breech presentations.[100]

A study to evaluate the effectiveness of kempu medicine i.e. Xiong-gui-tiao-xue-yin (Kyuki-chouketsu-in), which is a Japanese traditional herbal medicine, was conducted on 268 pregnant women who delivered normally at Osaka Medical College Hospital. The subjects were randomly assigned to one of the two groups. 134 were allotted to the experimental group and the remaining 134 were allotted to the control group. The experimental group received Xiong-gui-tiao-xue-yin (Kyuki-chouketsu-in) along with routine treatment whereas the control group received only routine care. The tool used to measure the psychological state was maternal self - report inventory and EPDS on the 5th day and at 2 weeks after delivery. The findings revealed that there was a higher incidence of maternal blues, depressive mood and nervousness, respectively in the control group than the experimental group. The results of this study imply that this Japanese medicine was effective in improving the mental health of the post partum women and prevent maternity blues. [101]

A study to evaluate the efficacy of exercise along with social support among postnatal women to examine its effect on maternity blues was conducted using a randomized controlled trial. The sample consisted of 84 postnatal mothers with postnatal blues. The mothers were assigned randomly into the exercise group (42) and the treatment as usual group (42). The interventional group was given a pram walking exercise program and social support for 30 minutes session a day for 12 weeks. The treatment as usual group received routine care. Pretest data of physical fitness and structured questionnaires were compared to post-test effects after 12 weeks. The tool used was a maternal blues scale developed by Stein and fitness questionnaire to measure the fitness outcome. The results showed that mothers in the pram-walking intervention group improved their fitness levels and reduced their level of blues symptomatology and depressive symptoms, than the control group. It is recommended that pram-walking programmes for mothers with postnatal blues can be implemented with available resources such as social support.[102]

Literature has shown that studies conducted previously have reported that there was a incidence and prevalence of mood disorders, and psychosocial illness and stress during pregnancy. Very few studies have examined the effects of guided imagery on reducing psychological stress during pregnancy.

A study to evaluate the effectiveness of guided imagery on stress, anxiety and maternal blues among parturient women was carried out at Cindrella maternity center, Florida. The author used an experimental design and the sample consisted of 300 primi parturient mother. The subjects were allotted into experimental group (n = 150) and control group (n = 150) groups. The experimental group received two weeks of guided imagery intervention of 30 minutes duration along with routine care. The control group received only usual perinatal care. The tool used for self-report

measures were Perceived Stress Scale (PSS), State Scale of the State-Trait Anxiety Inventory (S-STAI) and Steins Blues Scale.

The Findings suggested that the parturient women in the experimental group i.e. guided imagery group showed a significant decrease in stress, anxiety and postnatal blues after 15 sessions of guided imagery when compared with the control group. The control group only showed a significant decrease in stress after two weeks. The findings of the study can be used to motivate the parturient women to use this cost-effective method of complementary therapy (guided imagery) in their day today activities to prevent stress, apprehension, and baby blues.[103]

A quazi - experimental study to examine the effectiveness of guided imagery with massage on maternity blues and profile of mood states among the postnatal women was carried out in a maternity center at Miami. The sample consisted of 36 mothers who delivered normally of a full term primi mothers. The subjects were allotted to the experimental group (16) and the remaining (20) were allotted to the control group. The mothers in the experimental group received 30-minute Guided imagery -massage from the second postpartum day for 7 days; and the mothers in the control group received usual care alone. 20 mothers were in the control group. All mothers completed the following four standardized questionnaires before and after the intervention: 1) Maternity Blues Scale; 2) State-Trait Anxiety Inventory; 3) Profile of Mood States (POMS); and 4) Feeling toward Baby Scale. The analysis revealed that maternity blues scores, and anxiety scores significantly reduced in the interventional group (guided imagery -massage group). The author concluded that guided imagery - massage was an effective intervention for postpartum mothers to improve their physical and mental status which inturn facilitates mother-infant interaction.[104]

A study to identify the effectiveness of Early Childhood Nurses (ECNs) trained in Cognitive Behavioural Therapy on Post-natal Blues was undertaken among postnatal mothers. Cognitive Behaviour Therapy Training was given to five Early Childhood Nurses and they were supervised weekly. Postnatal women were screened post-natally on 3rd day using the maternal self - report inventory and diagnostically assessed by a research registrar. Postnatal women with mild – moderate blues (n=37) were then randomly assigned into either 'ideal standard care' (n=20) or CBT (n=17) for six day sessions.

After 6 day sessions of cognitive behaviour therapy or ideal standard care again the level of postnatal blues were assessed with the same maternal self - report inventory on 7th day. The findings suggested that training package was evaluated both by ECN completed questionnaires and analysis of taped therapy sessions, 70 – 80% of the postnatal mother's blues was reduced in both the groups. The investigator concluded that the evaluations indicated that the ECNs could deliver modified CBT.[105]

A study to assess the effectiveness of a therapeutic group programme, provided by community health workers, on anxiety, blues and depression associated with postnatal blues among postpartum women in a rural setting was undertaken by the investigator.

150 postpartum women were selected conveniently for the study and were allotted either to an experimental group or control group. 75 mothers in the experimental group underwent a 9 day therapeutic group program by the community health people along with routine perinatal care whereas the remaining 75 mothers underwent usual care alone. Women reporting difficulties in the postnatal period were recruited through community health services. Johnson's "Am I Blue?" questionnaire

was used to measure the postnatal blues; Hospital Anxiety Scale was used to measure anxiety symptoms before starting the group programme, and at the completion of the programme and at two follow-up times.

Blues scores and anxiety scores revealed a significant reduction from pre - to post therapeutic group programme. The results showed that therapeutic group work is an effective intervention that can be applied by community health workers in a rural setting. [106]

A study to evaluate the effectiveness of providing information on postpartum blues among postnatal mothers was undertaken. A convenient sample of 80 postnatal women who agreed to participate in the study was selected for this study. The sample was assigned during the third trimester of pregnancy randomly either to the experimental group or the control group. The experimental group mothers were given information regarding postnatal blues and the mothers in the control group were not given the information. All the participants completed Skillman postnatal blues questionnaire on 3rd day and 5th day postpartum. The magnitude of the differences between the means scores of the blues of both the groups were estimated using effect size. The findings quoted that postnatal blues was reduced from a small to medium effect. The study concluded that providing information on postpartum blues during the third trimester of pregnancy reduces the intensity of baby blues symptomatology.[107]

Belleruth Naparstek explains that the guided imagery is a gentle but powerful technique that focuses and directs the imagination. It's a right brain function, evoking it, which will access contiguous functions: emotions, intuition, empathy, laughter, sensitivity to music, and openness to spirituality.

Mind-body therapies are used now commonly in today's world. MBT are used by 16.6% of adults in the United States. Though little is known about the patterns and reasons for the use of MBT by adults with common medical conditions.

A descriptive study to determine the use MBT among the adults was carried out in Mexico. The total sample size was 31,044 adults who were selected conveniently. The commonest MBT in the survey questionnaire included was relaxation techniques (deep breathing exercises, guided imagery, meditation, and progressive muscle relaxation), yoga, tai chi, and qigong. The survey revealed that 5170 of the adults practices some form of MBT; and the multivariate analysis revealed that the commonest MBT used was meditation, guided imagery, and progressive relaxation; the analysis also reported that MBT was used for some of the medical conditions such as various pain conditions, anxiety and depressive symptoms. Above 50% of the subjects used MBT in conjunction with conventional medical care, and 20% used MBT for conditions they thought conventional medicine would not help.[108]

Imagery a type of cognitive behaviour therapy is proved to be very effective in the treatment of stress, anxiety, blues and depression. Imagery is at the center of relaxation techniques. When imagery is practiced it secretes some chemicals in the brain and this chemical has hypnotic and tranquilizer effect which may reduce the blood pressure, heart rate, and anxiety levels. This was proved by number of researchers. Many of the medical symptoms are reduced by relaxation and hence, doctors prescribe imagery for relaxation and to reduce the symptoms. It is commonly prescribed in conditions such as pain, neck discomfort, hypertension, head ache, stress related symptoms etc.[109]

Researchers at Ohio State University in Columbus, Ohio found that parturient women, who practised imagery during labour felt more relaxed, better prepared for delivery, reduced incidence of baby blues, than those who didn't use the technique. Several studies report that imagery can also boost the immunity. Danish researchers have found increased natural killer cell activity among ten college students who imagined that their immune systems were becoming very effective.[110]

Pregnancy, labour and delivery is one of the most natural experiences a woman can have. Research indicates that with proper use of guided imagery/ hypnosis the expectant mothers experience shorter labor, reduce the need for pain medication and have a statistically reduced incidence to caesarian section and use of forceps additionally, at birth the baby's Apgar scores which is a measurement of baby's well being likely increases at birth, reduced pain in postnatal pain, reduced stress, reduced anxiety and lowering blood pressure in pregnancy induced hyper tension.[111]

A study to evaluate the effectiveness of Imagery on complications of pregnancy was done on 100 primipara women in the third trimester whose babies were in breech positions at 37 to 40 weeks gestation. The author compared with a matched comparison group. 50 primipara women were allotted to the experimental group for whom 15 sessions of guided imagery of 15 minutes duration was given for 2 weeks and the remaining 50 primipara women did not receive guided imagery intervention. The findings revealed that in the experimental group 81% of the babies turned to proper position spontaneously than compared with the control group where only 41% of the babies turned to the position spontaneously thus proving that guided imagery was effective.[112]

A study to determine the effect of positive affirmation and guided imagery on the final part of pregnancy was undertaken at National Institute of Health using a randomized controlled design. 68 antenatal mothers with 37 weeks of gestation were selected randomly to the study. 34 of them were assigned to the experimental group where a CD with an information booklet regarding pregnancy and labour along with usual prenatal care for 2 weeks, and 34 of them were assigned to the control group who received the usual prenatal care alone. Labour outcome was measured by Deli's labour outcome scale, Edmonton pain scale, Hospital Anxiety Index. The study Results revealed that outcome measures were monitored both during and after delivery. There was a better apgarscore for the baby, discomfort at labour reduced, pain during delivery, and anxiety was reduced and better score on total well being.[113]

An experimental study to assess the effectiveness of guided imagery among pregnant women was carried out among 60 pregnant women, half of whom received hypnotic suggestion – guided imagery and the remaining did not get any intervention. The intervention was given in the last 2weeks of pregnancy from 38th week of 20 minutes duration daily. Assessment of pain during labour, apgar, medication usage was done during delivery and after child birth by using Mc Gill pain scale, partogram, and birth outcome scale. The results reported that the treatment group had quicker progress through stage 1 of labor, less reported pain, less use of medication and their babies had higher Apgar scores at 1 and 5 minutes. The study concluded that guided imagery relaxation and hypnotic suggestion can increase women's feelings of control and confidence in a labor process, significantly reduces their perception of pain.[114]

A study to identify whether guided imagery was effective on postnatal Blues and anxiety among pregnant women with hypertension was undertaken in a Corporation Maternity Center. The sample consisted of 69 pregnant women with hypertension who were randomized to experimental group (36) and to the control group (33) were selected by simple random sampling. The participants in the interventional group received guided imagery for 4 weeks from 36th week till delivery and the participants in the control group received only quiet rest. The variables measured were postnatal blues, arterial pressure, systolic and diastolic blood pressure, and anxiety were measured by maternal self report inventory and STAI at birth and at one week after child birth. The results revealed that pregnant women who were allocated to guided imagery group had lower postnatal blues, reduced anxiety, lowered mean arterial pressure over time than those allocated to quiet rest (GI M=6.55,SD=7.63,Quiet rest M=5.93MMHg SD=6.55,t=2.36 p=0.02). The study concluded that guided imagery was effective in reducing blues, anxiety, and blood pressure among pregnant women with hypertension.[115]

Regular exercise is the mantra that rings in our ears in the recent world for a healthy living. It helps to stay fit in the society and prevents various disorders related to life style factors. Performing exercises requires energy and this inturn burns the body fat and glycogen which is fuel for doing exercises. Regular exercises make a person stronger and leaner. Performing aerobic exercise such as walking, swimming, running, hiking, or biking, strengthens a person's heart and lungs, on the other hand while performing anaerobic exercise, such as strength training, builds the muscle mass.

Impact of Physical Activity during Pregnancy and Postpartum

Physical activity from the olden days has an impact over the health aspects of the individuals; moreover, it has also more beneficial effects for the women during her pregnancy, labour and child birth process. Research more than 20 years has reported and ultimately supported the effect of physical activity during puerperium. Studies have shown very few negative effects towards use of physical activity, exercises in pregnancy and in post - partum period towards the health of the gravida and positive benefits to the fetus. It is also found beneficial in tackling the conditions such as preeclampsia, gestational diabetes, breastfeeding, weight loss, musculoskeletal disorders, mental health, and offspring health and development. Hence the beneficial effects outweigh the other effects, hence physical activity can be practiced safely among the parturient women.[116]

Post-natal exercise plays an important role in improving the circulation, strengthen the pelvic floor and abdominal muscles, and to prevent transient and long term problems. The postnatal exercises also aids in drainage of lochia, encourage ante-version of the uterus, movement in and outside the bed.

Breathing exercises: It is important to be aware of one's natural breathing system and rhythm hence variations can be recognized if they occur. A fewer deep breaths now and again will help the venous return and aid the oxygen supply to both the pregnant women and her baby but only three to four breaths should be taken at a time as hyperventilation is likely to occur during pregnancy. It minimizes future prolapse and stress incontinence, prevents back pain, and genital prolapse.[117]

There are several reasons why there is a need to start gentle exercises soon after the mother had delivered a child. It helps to prevent or relieve minor discomforts such as backache, promotion of speedy recovery, prevents future orthopedic disorders, gynecological problems and boosts the mood of the women by balancing the serotonin, cortisol, and progesterone levels. It also provides the mother with more energy levels when the mother is tired, improves physical strength and stamina, above all it helps to reduce post-natal blues and postnatal depression.

Yoga Alleviates Postpartum Blues

Postpartum blues among the postnatal mothers is the result of hormonal imbalances as per research it is a common condition affecting the women in the first week of postpartum. A Recent study to assess the effect of yoga on maternal blues among the first time mothers was conducted at the University of California, Irvine. The sample consisted of 126 primi postnatal mothers who were grouped into 2 categories 60 in the experimental group and 66 in the control group by random sampling. The women in the experimental group were given yoga therapy sessions for 30 minutes duration for 2 weeks and the control group was given the usual care. The tool used was Steins maternal blues scales and the data were collected at 1st week and at 2nd week. The findings suggested that Yoga potentially holds the key to alleviating this condition. Postnatal blues was reduced at 1st week comparing with the 2nd week scores. The sudden rise and fall of hormonal levels can cause the endocrine system to behave abnormally and create havoc for the mother, during the postnatal phase.[118]

Postnatal exercise sessions are offered to pregnant women in a variety of ways by different professional groups. The trainers or the demonstrators particularly belong to the health care team such as Nurses, Midwives, Health visitors, Physiotherapists, and other health care professionals, trained and non trained exercise instructors. Exercise sessions should be designed to stimulate interest in the physical changes occurring, to promote body awareness and to facilitate mental and physical relaxation. Classes held early in pregnancy allow for advice and discussion relating to rest. Moderate exercise during pregnancy stimulates circulation, helps to keep joints flexible, creates good muscle tone, and promotes a general sense of well being. Research also suggested that women who exercise regularly during the pregnancy period have an improved course of pregnancy and labour compared to those who lead a sedentary life style.[119]

A study to evaluate the effectiveness of yoga programme on maternal discomforts among primigravidas in the third trimester of pregnancy was conducted at Roche Hospital in Conasca. The sample consisted of 74 primigravida women who were selected by simple random sampling. The target population was primigravidas at 26-28 weeks of gestation (no high-risk pregnancies) who had not engaged in regular exercise or yoga for at least one year, 38 mothers were allotted to the yoga group and the remaining 36 was allotted to the treatment as usual group. The yoga group received 12 -14 weeks of prenatal yoga of 30 minutes duration, 3 sessions for a week. The findings revealed that women who took part in the prenatal yoga programme reported significantly fewer pregnancy discomforts than the control group. The subjects in the yoga group exhibited higher outcome and self-efficacy expectancies during the active stage of labour than compared with the control group.[120]

A study to determine the effect of yoga on postnatal blues, self - esteem and postnatal depression among postnatal women was conducted in a city hospital maternity center. The subjects were selected purposively from a selected hospital. 140 women were selected prenatally. 70 mothers were assigned to the experimental group and the remaining 70 mothers were assigned to the control group. The interventional group mothers received 70 minute session of silver yoga therapy for one month; 3 times a week whereas the control group did not receive any intervention. Data on postnatal blues were collected by maternal self - report inventory, self - esteem by Rosenbergs self - esteem scale, on 3rd day, 7th day, and data were collected on postnatal depression by using EPDS at 6months and at one year. The findings suggested that blues was reduced in the experimental group and self - esteem was improved in the experimental group than the control group. The mothers in the experimental group had less incidence of postnatal depression when compared with the control group.[121]

A study to compare the effect of 2 therapies qigong and yoga for balancing the holistic mind-body in terms of postnatal blues, stress, anxiety, and quality of life was conducted among the postnatal women at china. 200 postnatal women were selected randomly into two groups, 100 in the qigong group and 100 in the yoga group. The data were collected using Johnson's maternity blues scale, STAI, Perceived stress scale on 5th day, 10th day and at 6 months after child birth. The yoga group received 30 min duration 3 sessions per week for 2 weeks and the qigong group also received for 2 weeks. The findings reported that both the alternative therapies can prevent mental health disorders such as anxiety, postnatal blues and stress, and a better quality of life. But the percentage of difference was better in the yoga group than in the qigong group. Hence, use of yoga had a better option than qigong therapy.[122]

A study to evaluate the effectiveness of yoga on personality and self - esteem among postpartum women was carried out as a randomized comparative study. 226 postnatal women were selected as a sample and they were allotted randomly into either yoga group or the comparison group (113 in each group). The yoga group received exercises such as asanas, pranayama, meditation, notional correction, and devotional sessions one hour daily for six days a week continously for eight weeks. Whereas the comparison group practised mild to moderate physical exercises. Both groups had supervised practices for one hour daily, six days a week, for eight weeks. Personality was assessed before and after eight weeks using an Inventory of Personality and self - esteem was assessed with a Global self - esteem scale.

The findings suggested that there was a significant improvement in all domains in both groups. The improvement in personality was significant in the yoga group and self - esteem was more increased in the yoga group than compared with the subjects in the physical exercise group. The study has shown the influence of Yoga on Gunas and self - esteem in comparison to physical exercise among the postpartum women.[123]

To examine the effects of a short-term Iyengar yoga course on mood among young postpartum women having mild to moderate blues was undertaken. Young pregnant women were pre-screened for mild to moderate levels of postnatal blues and they were randomly assigned to a yoga course or wait-list control group. 28 full term antenatal mothers were selected as sample whose ages were between 18 to 29 years of age. 14 of them were assigned to yoga group and the remaining 14 were assigned to the waitlist group. Subjects in the yoga group attended two 1-hour Iyengar yoga classes each week for 5 consecutive weeks from 38th week to 3 weeks after child birth and subjects in the wait list group had routine care. The measures were postnatal blues

scale, Beck Depression Inventory, State-Trait Anxiety Inventory, profile of Mood States. The findings revealed that Subjects who participated in the yoga group demonstrated a significant decrease in self-reported symptoms of postnatal blues and trait anxiety. Changes also were observed in acute mood, negative mood was reduced and mood swings was reduced with emotional lability among the subjects in the yoga group than compared with the waitlist group.[124]

Research has shown that the level of cortisol, the important stress hormone, are generally elevated during pregnancy and child birth in order to cope up with the stress involved during pregnancy and childbirth. The hormone levels are leveled after the baby is born. Some women have been shown to have extremely elevated levels of cortisol late in pregnancy, naturally after child birth the hormone levels decrease drastically and this sudden drop in the cortisol levels may lead to postnatal depression.

The miraculous event is that yoga and deep breathing which is a constituent of yoga aids in correcting the hormone levels thereby improving the affect of the postpartum women. Yoga stimulates the physical and mental relaxation and deep breathing can improve venous return and oxygen supply to both the mother and the fetus.

The combination of gentle, thoughtful exercise. There are many yoga classes available for mothers regarding care of mother and her baby. A mother attending a class on this ideally focuses on oneself. This allows a better bonding between mother and child through yoga. Gentle yoga can be used to help a person to connect with one's feelings and release them, healing body and mind uniformly and simultaneously.[125]

There are different aspects of yoga like asanas and pranayama have indispensable applications in the treatment of postnatal mood disorders and postnatal depression. Some specific postures are available to regulate the effect on the endocrine system and hormones,

A study to determine the effect of Pranayama on stress, baby blues, and anxiety among postpartum was undertaken at 2 selected hospitals in Chitwan District at Nepal. 60 Primi postnatal mothers who had no previous history of complications during pregnancy were selected conveniently and used a Non equivalent control group design. The subjects were allotted into Pranayama group (30) and the control group (30). The pranayama group participants practiced 5 sessions of Pranayama every day for 10 days and the control group participants were given routine care alone. Baby blues was measured by Skillmann's "Am I Blue?" questionnaire, stress was measured by Lazarus stress scale, and anxiety was assessed by STAI on 5^{th} day and on 11^{th} day. The findings showed that on 5^{th} day baby blues were minimal and stress was reduced than the comparison group. Whereas there was no difference between the stress levels in both the groups. Hence the author concluded that the short time benefits of Pranayama do not have an impact on the stress levels of the postnatal women. The author also added that additionally, the practice of meditation or relaxation techniques such as yoga nidra, may balance the hormonal activity of the nervous system and endocrine systems, which may decrease the body's predisposition to react to stress which inturn secretes less stress hormones.

Though many therapies are available for postnatal blues, Yoga seems to be a perfect form of therapy for postnatal blues. Yoga provides restorative health in many ways such as maintaining body image; modifying life style factors, restrengthening of all the muscles used in labour and child birth. It increases the stamina, builds up the

strength and improves the overall physical and mental well being. The physical exercises in the form of yoga can be done in a class room or at home or at any place. It can also be practised with DVD by seeing the demonstrations.[126]

How Flow Yoga May Help To Improve the Self-Esteem

What is Flow Yoga?

Flow yoga is otherwise called as Vinyasa. It is a form of yoga in which series of Asanas are followed and joined together to create a smooth pattern called a flow. Every position which is maintained by the body forms a smooth and rhythmic breathing pattern which is joined through rhythm of the lungs. Overall this type of yoga unlike other yoga does create strength and energy in postpartum women's body. Although this type is common among the Western culture, today it is used in managing the life style based disorders such as eating disorder, drug addicts, and trauma.

A study to evaluate the effect of Flow yoga on postnatal blues and self - esteem among the primigravida mothers at Cuttack was carried out. A sample of 300 primigravida mothers was selected for the study and they were assigned into the experimental group (150) and control group (150) randomly. The mothers in the experimental group received flow yoga and hatha yoga, two sessions daily for 7 days and the control group participants were given only the routine care. Postnatal blues was measured on the 7^{th} day by Kennerly blues scale and self - esteem was measured by using global self - esteem scale and family self - esteem scale for both the groups. The final analysis of the study revealed that the experimental group women had less postnatal blues and good self - esteem than the participants in the control group. Whereas there was no difference in family self - esteem between both the groups.[127]

A study to evaluate the impact of yoga in comparison with walking exercises on labour outcome, blues, and pregnancy outcome was done at Gunasheela Maternity Hospital at Bangalore. The sample consisted of 335 pregnant women (165 in the experimental group and 170 in the control group) who were selected randomly and assigned to either to the experimental group who practiced yoga practices such as asanas, breathing exercises and meditation for 16 – 18 weeks until delivery and the control group women did 30 minutes of walking exercises. The research report revealed that yoga group had decreased preterm labor, decreased postnatal blues, and increased birth weight of the babies when compared with the control group. Incidence of Pregnancy Induced Hypertension (PIH) was reduced in the yoga group as compared with the comparison group. There were no adverse effects noted in the yoga group.[128]

A Study carried out in the Department of Obstetric Gynaecological Nursing and Midwifery, at Prince Songkla University, Thailand was focused on the effectiveness of yoga on postnatal blues, pain, birth outcome, maternal outcome and self - esteem, during pregnancy was examined. 70 pregnant women were selected for the study 35 in the experimental group and 35 in the control group. The tool used was demographic characteristics, Blues scale, Mc Gill pain questionnaire, Cohen's labour outcome checklist, and trait anxiety scores were used. The experimental group practiced yoga therapy for 40 minutes, of 3 sessions per week from the 30th week of pregnancy until 1st week of delivery. The findings showed that practising yoga was found to have shorter duration of the first stage of labor, reduced postpartum blues, improved self - esteem and higher maternal comfort during labor when compared with the control group.[129]

A recent study conducted to examine the feasibility and acceptability of a mindful yoga therapy on maternal psychological and physical distress among pregnant women was carried out at Walden University, Baltimore. The sample consisted of 158 pregnant women. Baseline and post-treatment measures examined state and trait anxiety, maternal blues, perceived stress, pain and morning salivary cortisol in a single treatment group. The subjects practised mindful yoga in the second trimester to third trimester. Parametrical analysis showed that the pregnant women who practised mindful yoga in their second trimester had reductions in physical pain, reduced maternal blues. The mindful-based yoga group pregnant women had lesser perceived stress and lesser anxiety. The study concluded that yoga has potential effect in reducing maternal distress, if the intervention is started early during the pregnancy.[130]

A study to identify the relationship between maternal aerobic exercises and discomfort during pregnancy, maternal self - esteem was done using a pre experimental design at Baltimore maternity center. A sample of 53 pregnant women were selected conveniently and they were allotted to experimental and the control group. The experimental group participated in aerobic exercises and the control group comprised of non exercising pregnant women. Aerobic exercises was practiced by the pregnant women for 30 min duration of 3 sessions a week and for 3 weeks from 27th week to 30th week of pregnancy.

Data were collected on self-history, pregnancy discomfort, and self-esteem using a self history form, pregnancy discomfort checklist, and Rosenberg's self - esteem scale. The analysis reported that there was a higher self-esteem and lower physical discomfort scores among the pregnant women who practices aerobic exercises. Statistically there was a significant lower scores for the symptoms such as

backache, headache, fatigue, shortness of breath, and hot flashes in the exercise group when compared with the control group. The findings suggested that there was a negative relationship between the amount of exercise practiced by the pregnant women and self - discomfort during pregnancy, and a positive relationship between the amount of exercise and self - esteem in the third trimester. But the sample selection lack in a random assignment to groups.[131]

Is yoga better than other exercise for boosting self-esteem? Dave Munger

Yoga has been one important therapy and advancement among all the therapies available in this modern era of current trends and advancements. Many people including friends and family members suggest joining in yoga classes. The reasons for that is, one becomes stronger and flexible but also may feel better about them.

A study to identify the effectiveness of exercise and yoga on self - esteem was under taken among pregnant women at Edgbaston speciality hospital. A sample of 160 pregnant women in the last trimester was selected for the study and among them 80 pregnant women was assigned to the experimental group and the remaining 80 were assigned to the control group. The experimental group mother's practiced pranayama for 20 minutes and walking for 30 min for 6 weeks. Self - esteem was measured at 7^{th} day after child birth in both the groups using global self - esteem scale. The findings reported that the pregnant women who practiced pranayama and walking had higher and good self - esteem when compared with the control group.[132]

When discussing about the postnatal exercises its evident from the literature that for the postnatal mothers the postnatal exercises includes: Kegels, Deep breathing, abdominal crunches, pelvic floor exercise (lying down, sitting), neck exercises, hip exercises, exercise for the lower abdominal muscles, gentle tummy exercise, brisk walking ,sit-ups, exercising with your baby, leg and arm exercise. These exercises cause a great difference in recovery of the mother after the child birth. It'll boost mother self-esteem and confidence by getting increasing their energy levels and help fight the baby blues and postnatal depression by combating any stress and anxiety mother may be feeling.

A study to determine the effectiveness of postnatal exercises along with pranayama in terms of self - esteem, stress, and baby blues among the primipara mothers at a selected hospital in kolar was assessed. A sample of 60 primipara mothers was selected conveniently and was assigned to one of the two groups the experimental group and the control group. The experimental group (n = 30) practised pranayama 2 sessions daily of 20 minutes duration from 3 days before labour till 7 days postnatally, and postnatal exercises form the 2^{nd} postnatal day till 7^{th} postnatal day 3 times a day for 6 days and the control group practised usual care alone. The tool used to measure blues was maternal self - report inventory, self - esteem was measured by Rosenberg's Self - esteem scale, and stress was measured by perceived stress scale by Holmes and Raage on the 7^{th} postnatal day for both the groups.

The analysis of the study reported that the postnatal blues was reduced in the experimental group, stress was reduced in the experimental group, and self - esteem was greater and improved in the experimental group as compared with the control group.[133]

A Meta analysis conducted on 32 studies related to the effectiveness of pushing exercises on postnatal blues and symptoms associated with discomfort of pregnancy among parturient mothers was undertaken at Mississippi. Multifaceted analysis showed that mothers who practised pushing exercises during their prenatal period in the last trimester had reduced postnatal blues and reduced symptoms of discomfort associated with pregnancy. However it differs across the culture and there is little evidence to justify this intervention in the developing countries, hence further research is needed in this area to justify. [134]

Research during the last 20 years had rigorously focused on the safety of physical activity during pregnancy. The reports have proved few negative effects on the pregnancy of healthy women. But as quoted earlier, the positive effects outweigh the negative effects to both the mother and the fetus. Yoga should not be practised during menstruation and also it does not help in weight reduction.

A study to identify the effect of yoga in terms of weight reduction among the postnatal mothers was carried out at a selected hospital in Southern part of Brazil. The sample selected for the study was 228 postnatal mothers who were 2 weeks post partum after their child birth. 114 mothers were assigned to the experimental group who practised yoga therapy for 30 min duration daily for 4 weeks, and the remaining 114 mothers were assigned to the control group did not perform any exercises. The weights of the postnatal mothers were measured at the end of each week. The findings suggested that there was no difference in the mean weights of the postnatal mothers between the experimental group and the control group. The mothers did not lose weight as expected and as quoted by previous research reports. Hence, it can also be proved that yoga has a negative effect on weight loss of an individual especially among postpartum mothers. [135]

CHAPTER III

METHODOLOGY

Methodology deals with the approach of research, research design, setting of the study, population, criteria for sample selection, sample size, sampling technique, description of tool, scoring procedure, pilot study, data collection procedure, data analysis and protection of human rights.

3.1. Research Approach

A quantitative approach was used in this study to evaluate the effectiveness of complementary and alternative therapies in terms of postnatal blues and maternal self - esteem.

3.2. Research Design

A true experimental design (post test only control group design) was used in this study.

GROUP	MANIPULATION	POST ASSESSMENT
I (R)	**X** Routine care with Complementary and alternative therapies	**0_1**
C (R)	Routine care without complementary alternative therapies	**0_1**

Key

I : Interventional Group

C : Control Group

(R): Randomization

O_1: Post assessment for estimation of postnatal blues and maternal self - esteem.

X: Intervention - complementary and alternative therapies twice a day for 5 consecutive days.

3.3. Variables

Independent variable: Complementary and Alternative therapies. (Prophylactic information, postnatal exercises, Yoga - Pranayama, Guided imagery)

Dependent Variable: Postnatal blues, and Maternal Self - esteem.

Socio – demographic variables

Age, marital status, locality of residence, level of education of the mother, occupation of the mother, level of education of husband, occupational status of husband, work pattern, type of family, income of family/ month and support group during perinatal period.

Obstetrical Variables

Registration in antenatal OPD, previous experience of seeing deliveries/ postnatal period of relatives/ friends, duration of labor, mode of delivery, gender of the child, birth weight of the baby, congenital abnormalities of the child, health status of the child, history of any complication during pregnancy and family history of any complication during pregnancy.

3.4. Setting of the study

The study was conducted at Government Rajaji Hospital, Madurai. This Hospital is a 2518 bedded with all super specialities. Maternity unit comprised of one antenatal ward (100 beds), one postnatal ward (85 beds for Normal Delivery and 100 beds for LSCS), two labour rooms, and two special baby care units (NICU), and Pre term care units. It also has two operating rooms. The antenatal outpatient department remains open on all days between 7.30 am to 12 noon. On an average, there were 134 out patients per day and an average of 1194 women delivered per month.

3.5. Population

Target Population: The target population for the present study was all Primi postnatal mothers admitted at hospitals in Madurai.

Accessible Population: The accessible population for the present study was all Primi postnatal mother's admitted at Govt Rajaji Hospital, Madurai.

3.6. Sample

Primi postnatal mothers who were admitted at Government Rajaji Hospital Madurai and those who fulfilled the inclusion criteria.

3.7. Sample size

Sample size was calculated by using previous study of Blues incidence 70% study designed to reduce atleast 20% of blues from baseline with 5% α error and 20% beta error (80% power). The required sample size was 121 per group with 10% drop out rate sample size was 133, which was rounded off to 150 per group for this study.

The total sample size consisted of 300 postnatal mothers. (150 in the Interventional group and 150 in the control group) who were admitted at the Government Rajaji Hospital Madurai.

3.8. Sampling technique

Simple random sampling technique was used for this study. Since, it is not possible to have the entire subjects in one day; per week around 6 subjects were selected randomly by using simple random sampling technique from the available subjects based on criteria for sample selection.

3.9. Criteria for sample selection

Inclusion criteria

- Primipara mothers who delivered full term normal vaginal delivery
- Mothers who can speak and understand either English or Tamil.
- Mothers who were physiologically stable, who had live babies up to 5th postnatal day
- Mothers who were admitted in the postnatal wards till the 5th postnatal day and who were willing to participate in the study.

Exclusion criteria

- Postnatal mothers who had musculoskeletal problems.
- Postnatal mothers who were critically ill and those who were unconscious.
- Postnatal mothers who delivered through caesarean section.
- Postnatal mothers who had sensory deficit

Research Tool and Technique

Technique: Structured Interview.

3.10. Description of the Tool

The tool used for this present study consisted of 4 parts

Part I: Consisted of the socio – demographic variables of the postnatal mothers such as age, marital status, locality of residence, level of education of mother, occupational status of mother, level of education of husband, occupational status of husband, work pattern, type of family, income of family/ month and support group during perinatal period.

Part II: Consisted of the obstetrical variables of the postnatal mothers such as registration in antenatal outpatient department i.e. whether registered and had regular antenatal check up, previous experience of seeing deliveries/ postnatal period of relatives/ friends, duration of labor, mode of delivery, gender of the child, birth weight of the baby, presence of congenital abnormalities in child, status of health of the child, history of any complication during pregnancy and family history of any complication during pregnancy.

Part III: Consisted of the modified Kennerly blues assessment scale. Modified Kennerly postnatal blues assessment scale was prepared from kennerly blues questionnaire after getting permission from the author, and certified by experts. Few items were deleted and few items were added based on the literature review. It consisted of 30 items describing the postnatal mother's feelings when newly delivered. Out of the 30 items there were 15 positive items and 15 negative items. It consisted of a list of feelings or descriptions that newly delivered mothers have used to describe how they are feeling, on that particular day by putting a tick mark in the appropriate box. They are usually described as not there at all, seldom, often, always.

3.10. a. Scoring: The items were scored as follows

For items 1,2,6,7,9,10,11,14,15,16,21,22,25,26,27 it is scored as Not There at all: 1, Seldom: 2, Often: 3, and Always: 4.

For items 3,4,5,8,12,13,17,18,19,20,23,24,28,29,30 it is scored reversely as Not There at all :4, Seldom:3, Often:2, and Always: 1.

The minimum possible score was 30 and the maximum possible score was 120.

Level of Postnatal Blues was categorized as follows

No postnatal blues : 1 - 30

Mild postnatal blues : 31 - 60

Moderate postnatal blues : 61 - 90

Severe postnatal blues : 91 - 120

Part IV Consisted of the maternal self - esteem scale – This scale was prepared by the investigator by conducting an extensive Review of Literature from various sources. Based on the literature review and from the views of delivered mothers the items were classified under the mentioned aspects such as feelings concerning pregnancy, labor, and delivery (item numbers: 1, 2, 3), ability and preparedness for mothering (item numbers 4, 5, 6, 7, 8, 9, 10, 11) acceptance of baby (item numbers : 12, 13, 14), expected relationship with baby (item numbers : 15, 16, 17) parental acceptance (item numbers: 18, 19, 20, 21), body image and health (item numbers: 22, 23, 24, 25). It consisted of 25 items. Out of the 25 items there are 13 Positive items and 12 Negative items. They are usually described as Strongly Agree, Agree, Disagree, and Strongly Disagree

SCORING

Scores are calculated as follows:

For items 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 20, 23 and 25, it is scored as Strongly Agree: 4, Agree: 3, Disagree: 2, Strongly Disagree:1

For items 5, 7, 10, 11, 13, 14, 15, 17, 19, 21, 22, and 24, it is scored reversely as Strongly Agree : 1, Agree: 2, Disagree : 3, Strongly Disagree :4.

The scale ranges from 1- 100. The possible minimum Score was 25 and the possible maximum Score was: 100.

Higher Score indicates a good Self-esteem and a lower score indicates poor self - esteem.

Level of self - esteem were categorized as follows

1 - 50 : Low self - esteem,

51-75 : Moderate self - esteem,

76 - 100 : Good self - esteem

Intervention: Complementary and alternative therapies

It is a set of interventions which is given in such a way to adopt or enlighten the mothers on maternal adjustment with regard to postnatal blues and maternal self - esteem. The intervention package was prepared after thorough reviewing of literature and from expert's suggestion and opinion. The package consisted of

Prophylactic information: which comprised of a well - planned information to enlighten the mothers with regard to postnatal blues, causes, signs and symptoms of postnatal blues, strategies for making life a little easier, accepting help, following shortcuts, being kind to themselves, modifying their thinking, and helping the family to adapt so as to prevent postnatal blues. It was given for 30 min on the first day only.

Exercises and yoga therapy: which consisted of exercises such as Kegels, exercises for the abdominal muscles and the back muscles (7 min), along with yoga therapy – Pranayama (8 min) total of 15 min twice a day for 5 consecutive days was given. This aids in improving the body image and physical health.

Training for Yoga therapy: The investigator attended a training course on yoga therapy at Gandhi Museum for a period of 1month practical sessions and obtained a certificate for the same before data collection and pilot study.

Guided imagery: It is the use of relaxation and mental visualization to improve the mood and physical well - being. It is a healing technique which explores the connection between mind and body hence it is called as Mind Body Therapy. It is a two part process (deep relaxation, imagery). Guided imagery was given by auditory stimulation by using walkman and visual stimulation with the help of motion pictures. It was given for 15 min twice a day for 5 consecutive days.

Training for Guided Imagery: The investigator attended a training course on guided imagery and counseling at Valliammai Institute for 1month (136 Hours) of Theory and practical sessions and obtained a certificate for the same before data collection and pilot study.

3.11. Validity

The tool and the complementary and alternative therapy package was given for validation to 10 experts in the field of Nursing, Obstetrics and Gynaecology, Psychiatry, Psychology, Statistician and with the dissertation committee. They were requested to give their opinion on the criteria checklist regarding adequacy, relevance and appropriateness of items in the tool. Necessary modifications were made as per the expert's suggestion in the demographic and obstetrical profile of the postnatal mothers.

After construction of questionnaire, it was tested for its validity and reliability. Validity of the tool was assessed using content validity. Content validity was determined by experts from nursing and medical. They suggested certain modifications in tool. Educational status of husband, occupational status of the husband, health personnel in support group, was added in the socio- demographic variables. Previous experience of witnessing deliveries of relatives or neighbours, history of complications during pregnancy, family history of complications during pregnancy, health status of the child, were added in the obstetrical variables, postnatal mothers with musculoskeletal problems were added in the exclusion criteria. After the modifications, they approved this tool and was used in the study.

3.12. a. Reliability

The Reliability for the modified Kennerly blues assessment scale was calculated by cronbach's alpha r= 0.82. The reliability for the maternal self - esteem scale was calculated by cronbach's alpha 0.88. Thus the tool was found to be reliable and was used in this study.

3.12. b. Pretesting of the tool

Pretesting of the tool was done among 30 postnatal mothers at Govt Rajaji Hospital, Madurai. After pretesting the reliability of the tool was assessed by using Cron bach Alpha method and its correlation coefficient r –values are 0.84(postnatal blues) 0.87(self esteem), These correlation coefficients were very high and it was a good tool for assessing the effectiveness of complementary and alternative therapies in terms of postnatal blues and maternal self esteem among the postnatal mothers,

3.13. Pilot study

A Pilot study is a small preliminary investigation of the same general character of the main study. To assess the feasibility and practibility a pilot study was conducted on 60 non-study subjects (30 in experimental group and 30 in control group) at Gowrie Health Center, Madurai. After written consent from the subjects to find out the feasibility of the study and to estimate the time taken for the data collection for each subject. The findings of the pilot study revealed that the study was feasible and practicable.

3.14. Data collection procedure

The investigator has obtained an approval from the dissertation committee of CSI Jeyaraj Annapackiam College of Nursing Madurai, and from the Departmental Head of Obstetrics, Psychiatry, and Nursing of Govt Rajaji Hospital Madurai, and Ethical clearance was obtained from the Institutional Review Board of Govt Rajaji Hospital Madurai, to conduct the study. Both verbal and written informed consent were obtained from all the study participants and the data were collected by interview by the investigator herself. The mothers who belonged to the interventional group were provided with complementary and alternative therapies along with routine care

twice a day for 5 consecutive days. The mothers who belonged to the control group received only the routine care. After the intervention, mothers were further assessed for postnatal blues and maternal self - esteem on their 5th postnatal day. The mothers in the control group also were assessed for their postnatal blues and maternal self - esteem on the 5th postnatal day.

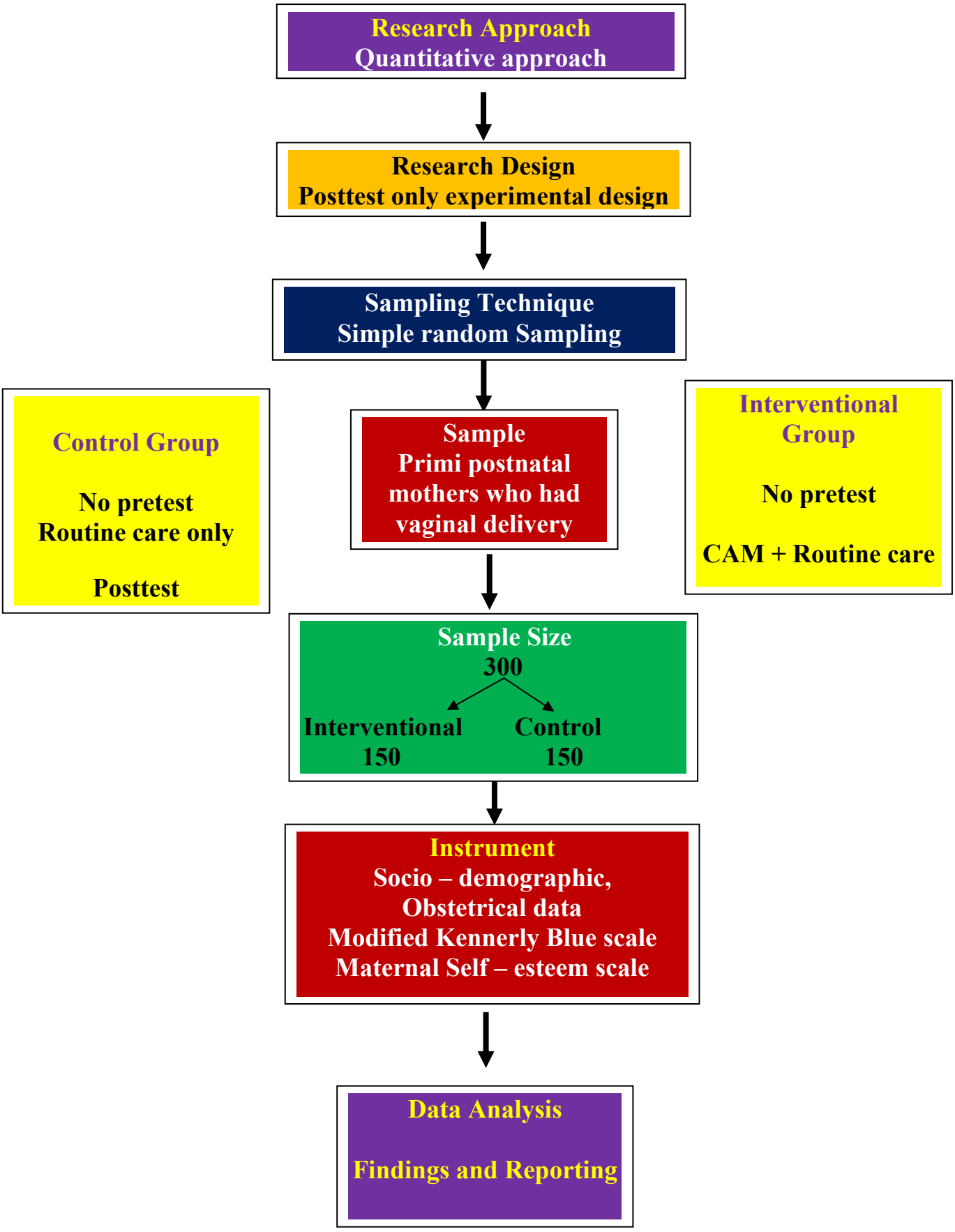
3.15. Plan for data analysis

- Socio – demographic variables in categorical/dichotomous was given in frequencies with their percentages.
- Postnatal blues and self - esteem scores were presented in mean and standard deviation.
- Association between level of postnatal blues and socio – demographic variables, obstetrical variables was analysed by using Pearson chi-square test.
- Association between level of self - esteem and socio – demographic variables, obstetrical variables was analysed by using Pearson chi-square test.
- Difference between Interventional and control group was analysed by using student independent t-test.
- Correlation between postnatal blues and maternal self - esteem was analysed by using Karl Pearson Correlation Coefficient.
- Effectiveness of Complementary and alternative therapies in terms of postnatal blues and maternal self - esteem among the postnatal mothers was analysed by using proportion with 95% CI and mean difference with 95% CI.
- Simple bar diagram, Multiple bar diagram, Pie chart, Box plot, scatter plot with regression estimate was used to represent the data.
- $P<0.05$ was considered statistically significant.

3.16. Ethical Considerations

- The study was conducted after obtaining ethical clearance from the Institutional Review Board of Govt Rajaji Hospital, Madurai, and after the approval of the dissertation committee of CSI Jeyaraj Annapackiam College of Nursing, prior to the pilot study and the main study.
- Permission was obtained from the Head of the department of Obstetrics, Psychiatry and Nursing of Govt Rajaji Hospital Madurai.
- An oral and written consent of all the participants were obtained prior to the data collection after explaining to them what was going to be done.
- Positive benefits were explained to all the participants. They were also explained that they may withdraw from the study at any time without any penalty.
- Anonymity and Confidentiality were maintained throughout the study.

3.17. Schematic Representation of Research Methodology



CHAPTER IV

DATA ANALYSIS - RESULTS

This chapter deals with the description of sample analysis and interpretation of the data collected to evaluate the effectiveness of complementary and alternative therapies in terms of postnatal blues and self-esteem among postnatal mothers. Then data were analyzed based on the objectives, using descriptive and inferential statistics. The data collected were tabulated and presented as follows

Section I. Distribution of postnatal mothers according to their socio - demographic variables and obstetrical variables.

Section II. Distribution of postnatal mothers according to their level of postnatal blues and self-esteem in the interventional and control group.

Section III. Effectiveness of Complementary and Alternative therapies in terms postnatal blues and self-esteem among postnatal mothers in the interventional group.

Section IV. Association between the level of postnatal blues, maternal self-esteem and the socio - demographic variables, obstetrical variables among the postnatal mothers in the interventional group and control group

Section V. Relationship between Postnatal blues and Maternal self-esteem among postnatal mothers.

STATISTICAL ANALYSIS

- Data analysis was done by using SPSS package version 16.
- Socio - demographic variables in categorical/dichotomous were given in frequencies with their percentages.
- Postnatal blues and self - esteem scores were given in mean and standard deviation.
- Difference between interventional and control was analysed using student independent t-test.
- Effectiveness of complementary and alternative therapies in terms of postnatal blues and maternal self - esteem among the postnatal mothers were analysed using proportion with 95% confidence interval and mean difference with 95% confidence interval.
- Association between level of postnatal blues, self-esteem and socio - demographic variables, obstetrical variables were analysed using Pearson chi-square test.
- Association between mean postnatal blues, self – esteem and socio - demographic variables, obstetrical variables were analysed using one – way ANOVA / student independent “t” test.
- Correlation between postnatal blues and self - esteem scores was analysed using Karl Pearson chi square test.
- Simple bar diagram, multiple bar diagram, box plot, scatter plot with regression estimate were used to represent the data.
- $P<0.05$ was considered statistically significant.

SECTION - I

Table 1: Distribution of postnatal mothers according to their Socio - demographic variables

N = 300

Socio - demographic variables		Group				χ^2
		Interventional Group		Control Group		
		f	%	f	%	
Age	<20 yrs	45	30.0%	48	32.0%	$\chi2$=0.22 p=0.89
	20 -25 yrs	92	61.3%	88	58.7%	
	26 -30 yrs	13	8.7%	14	9.3%	
Marital Status	Married	147	98.0%	148	98.7%	$\chi2$=0.00 p=1.00
	Widow	3	2.0%	2	1.3%	
Locality of Residence	Rural	89	59.3%	94	62.7%	$\chi2$=0.39 p=0.82
	Urban	26	17.3%	25	16.7%	
	Semi urban	35	23.3%	31	20.7%	
Educational Status	No formal education	14	9.3%	11	7.3%	$\chi2$=0.86 p=0.97
	Primary	26	17.3%	29	19.3%	
	High school	67	44.7%	70	46.7%	
	Higher secondary	26	17.3%	24	16.0%	
	Collegiate Education	14	9.3%	14	9.3%	
	Professional Education	3	2.0%	2	1.3%	
Occupation	Home maker	127	84.7%	128	85.3%	$\chi2$=0.55 p=0.99
	Daily wage Laborer	10	6.7%	10	6.7%	
	Farmer	10	6.7%	8	5.3%	
	Technical Job	1	0.7%	1	0.7%	
	Health Professional	1	0.7%	2	1.3%	
	Others	1	0.7%	1	0.7%	

Educational Status of Husband	No formal education	10	6.7%	6	4.0%	
	Primary	25	16.7%	38	25.3%	
	High school	84	56.0%	75	50.0%	
	Higher secondary	7	4.7%	7	4.7%	χ^2=4.19
	Collegiate Education	13	8.7%	13	8.7%	p=0.52
	Professional Education	11	7.3%	11	7.3%	
Occupation of Husband	Daily wage Laborer	77	51.3%	75	50.0%	
	Farmer	31	20.7%	30	20.0%	
	Technical Worker	28	18.7%	32	21.3%	χ^2=0.38
	Health Professional	6	4.0%	6	4.0%	p=0.99
	Government Employee	7	4.7%	6	4.0%	
	Others	1	.7%	1	.7%	
Work pattern	Sedentary	16	10.7%	17	11.3%	χ^2=0.66
	Moderate	63	42.0%	69	46.0%	p=0.72
	Strenuous	71	47.3%	64	42.7%	
Type of family	Nuclear family	53	35.3%	51	34.0%	χ^2=0.28
	Joint family	94	62.7%	97	64.7%	p=0.86
	Extended family	3	2.0%	2	1.3%	
Income of family Rs per month	Rs.1001-3000	51	34.0%	51	34.0%	
	Rs.3001-5000	62	41.3%	66	44.0%	χ^2=0.36
	Rs.5001-10000	35	23.3%	31	20.7%	p=0.94
	>Rs.10000	2	1.3%	2	1.3%	
Support group during perinatal period	Parents	127	84.7%	130	86.7%	
	In-laws	19	12.7%	17	11.3%	χ^2=0.34
	Husband	3	2.0%	2	1.3%	p=0.95
	Relatives	1	0.7%	1	0.7%	

The above table 1 portrays the distribution of postnatal mothers according to their Socio - demographic variables in the interventional and the control group.

While discussing the socio - demographic variables of the postnatal mothers.

When comparing the age group of the postnatal mothers in the interventional group, 45(30%) belonged to the age group less than 20 years, 92(61.3%) belonged to the age group between 20-25 years, 13(8.7) belonged to the age group between 26-30 years, where as in the control group 48(32.0%) belonged to the age group less than 20 years, 88(58.7%) belonged to the age group between 20-25 years, 14(9.3%) belonged to the age group between 26-30 years.

Regarding marital status in the interventional group, 147(98%) were married, 3(2%) were widow, where as in the control group 148(98.7%) were married, 2(1.3%) were widow.

When comparing locality of residence in the interventional group, 89(59.3%) hailed from rural area 26(17.3%) hailed from urban area 35(23.3%) semi urban area respectively .where as in the control group 94(62.7%), 25(16.7%), 31(20.7%) hailed from rural area, urban area, semi urban area respectively.

Regarding educational status of the postnatal mothers in the interventional group, 14(9.3%) had no formal education, 26(17.3%) have studied up to primary level education, 67(44.7%) have studied up to high school level education, 26(17.3%) have studied up to higher secondary level education 14(9.3%) have studied up to collegiate education, 3(2.0%) have studied professional education, where as in the control group 11(7.3%) had no formal education, 29(19.3%) have studied up to primary level education, 70(46.7%) have studied up to high school level education, 24(16%) have studied up to higher secondary level education 14(9.3%) have studied up to collegiate education,2(1.3%) have studied professional education.

When comparing the occupation of the postnatal mothers in the interventional group, 127(84.7%) were homemakers 10(6.7%) were daily wage labourers 10(6.7%) were farmers, 1(0.7%) was technical worker 1(0.7%) was health professional, 1(0.7%) was other worker, where as in the control group128(85.3%)were homemakers 10(6.7%) were daily wage labourers 8(5.3%) were farmers, 1(0.7%) were technical workers 2(1.3%) were health professionals, 1(0.7%) was other workers.

Regarding educational status of the husband in the interventional group, 10(6.7%) had no formal education, 25(16.7%) have studied up to primary level education, 84(56.0%) have studied up to high school level education, 7(4.7%) have studied up to higher secondary level education 13(8.7%) have studied collegiate education,11(7.3%) have studied professional education, where as comparing the control group, 6(4.0%) had no formal education, 38(25.3%) have studied up to primary level education, 75(50.0%) have studied up to high school level education, 7(4.7%) have studied up to higher secondary level education 13(8.7%) have studied collegiate education,11(7.3%) have studied professional education.

While discussing the occupation of husband in the interventional group, 77(51.3%) were daily wage laborers 31(20.0%) were farmers 28(18.7%) were technical workers, 6(4.0%) were health professionals, 7(4.7%) were government employees 1(0.7%) were other workers, where as in the control group75(50.0%) were daily wage laborers, 30(20.0%) were farmers, 32(21.3%) were technical workers, 6(4.0%) were health professionals, 6(4.0%) were government employees 1(0.7%) were others workers.

Regarding work pattern of the postnatal mothers in the interventional group, 16(10.7%) were sedentary workers, 63(42.0%) were moderate workers, 71(47.3%) were strenuous workers, where as in the control group 17(11.3%) were sedentary workers, 69 (46.0%) were moderate workers, 64(42.7%) were strenuous workers.

When comparing the type of family in the interventional group, 53(35.3%) belonged to nuclear family, 94(62.7%) belonged to joint family, 3(2.0%) belonged to extended family, where as in the control group 51(34.0%) belonged to nuclear family, 97(64.7%) belonged to joint family, 2(1.3%) belonged to extended family

Regarding family income per month in the interventional group 51(34.0%) were earning Rs 1001-3000, 62(41.3%) were earning between Rs 3001-5000, 35(23.3%) were earning between 5001-10000, 2(1.3%) were earning more than Rs10,000 per month. where as in the control group 51(34.0%) were earning between Rs 1001-3000, 66(44.0%) were earning between Rs 3001-5000, 31(20.7%) were earning between Rs 5001-10000 and 2(1.3%) were earning more than Rs10,000 per month.

When comparing support group during perinatal period in the interventional group 127(84.7%) were supported by parents 19(12.7%) were supported by In-laws, 3(2.0%) were supported and cared by husbands, 1(0.7%) was supported by relatives, where as in the control group 130(86.7%) were supported by parents 17(11.3%) were supported by in-laws, 2(1.3%) were supported by husbands and 1(0.7%) was supported by relatives

Table 2: Distribution of postnatal mothers according to their Obstetrical variables.

N = 300

Obstetrical variables		Group				
		Interventional Group		Control Group		
		f	%	f	%	χ^2
Whether registered in antenatal OPD	Yes	141	94.0%	143	95.3%	χ^2=0.26
	No	9	6.0%	7	4.7%	p=0.60
If yes number of checkups	0 -3 times	15	10.7%	14	9.8%	
	4 -6 times	75	53.1%	63	44.1%	χ^2=3.01
	7 -9 times	37	26.3%	47	32.8%	p=0.39
	10 -12 times	14	9.9%	19	13.3%	
Previous experience of seeing deliveries /postnatal period	Yes	19	12.7%	16	10.7%	χ^2=0.29
	No	131	87.3%	134	89.3%	p=0.59
Stage I	< 10 hrs	48	32.0%	47	31.3%	
	10 -12 hrs	66	44.0%	63	42.0%	χ^2=0.29
	>12 hrs	36	24.0%	40	26.7%	p=0.86
Stage II	< 1 hr	72	48.0%	73	48.7%	
	1 - 2 hrs	69	46.0%	68	45.3%	χ^2=0.01
	> 2 hrs	9	6.0%	9	6.0%	p=0.99
Stage III	< 10 min	70	46.7%	74	49.3%	
	10- 20 min	61	40.7%	57	38.0%	χ^2=0.24
	> 20 min	19	12.7%	19	12.7%	p=0.88
Mode of Delivery	Normal with Episiotomy	140	93.3%	141	94.0%	χ^2=0.06
	Forceps	10	6.7%	9	6.0%	p=0.81
Sex of the child	Male	89	59.3%	87	58.0%	χ^2=0.05
	Female	61	40.7%	63	42.0%	p=0.81
Birth weight of the Baby	< 1.5 kgs	11	7.3%	10	6.7%	
	1.5 - 2.0 kg	57	38.0%	60	40.0%	χ^2=0.15
	2.1 - 3.0 kg	79	52.7%	77	51.3%	p=0.99
	3.0 - 3.5 kg	3	2.0%	3	2.0%	

Congenital abnormalities of the child if any	Yes	14	9.3%	13	8.7%	χ^2=0.04
	No	136	90.7%	137	91.3%	p=0.84
Health status of the child	Healthy	126	84.0%	127	84.7%	χ^2=0.02
	Sick	24	16.0%	23	15.3%	p=0.87
History of any complications During pregnancy if any	Yes	5	3.3%	6	4.0%	χ^2=0.09
	No	145	96.7%	144	96.0%	p=0.75
Family History of any complication during pregnancy If any	Yes	3	2.0%	3	2.0%	χ^2=0.00
	No	147	98.0%	147	98.0%	p=1.00

The above table 2 portrays the distribution of postnatal mothers according to their obstetrical variables in the interventional and the control group.

While discussing about the Obstetrical variables of the postnatal mothers

When comparing whether registered in antenatal OPD in the interventional group 141(94.4%) had registered in the antenatal OPD, and the remaining 9(6.0%) were not registered, whereas in the control group 143(95.3%) had registered themselves in antenatal OPD, and the remaining 7(4.7%) were not registered in the antenatal OPD

Regarding the number of check up by the postnatal mothers in the interventional group 15(10.7%) of them underwent antenatal check up between 1-3 times, 75(53.1%) of them underwent 4-6 times of antenatal check up, 37(26.3%) of them underwent 7-9 times of antenatal check up, 14(9.9%) of them underwent antenatal check up between 10-12 times, where as in the control group 14(9.8%) underwent antenatal check up between 1-3 times, 63(44.1%) of them underwent antenatal check up between 4-6 times, 47(32.8%) of them underwent antenatal check up between 7-9 times, and the remaining 19(13.3%) of them underwent antenatal check up between 10-12 times.

Regarding previous experience of witnessing deliveries or postnatal period in the interventional group, 19(12.7%) of them had experience of witnessing deliveries or postnatal period, 131(87.3%) of them had no experience of witnessing deliveries or postnatal period. whereas in the control group 16(10.7%) had experience of witnessing deliveries or postnatal period and the remaining 134(89.3%) had no experience of witnessing deliveries or postnatal period.

When comparing the duration of 1st stage of Labour, in the interventional group 48 (32.0%) had a duration of less than 10 hours, 66(44.0%) had a duration between 10-12 hours, and 36(24.0%) had a duration of more than 12 hours in the 1st stage of labour. where as in the control group 47(31.3%) had a duration less than 10 hours, 63(42.0%) had a duration between 10-12 hours, and 40(26.7%) of them had a duration of 1st stage of labour more than 12 hours.

Regarding 2nd stage of Labour, in the interventional group 72(48.0%) had a duration of less than 1 hour, 69 (46.0%) of them had a duration between 1-2 hours, 9(6.0%) had a duration more than 2 hours, where as in the control group 73(48.7%) had a duration less than 1 hour, 68(45.3%) had a duration between 1-2 hours, 9(6.0%) had a duration of 2nd stage more than 2 hours.

When comparing 3rd stage of Labour, in the interventional group 70(46.7%) had a duration less than 10 min, 61(40.7%) had a duration between 10-12 min, 19(12.7%) had a duration more than 20min, whereas in the control group 74(49.3%) had a duration less than 10 min, 57(38.0%) had a duration between 10-20 min, and the remaining 19(12.7%) had a duration of 3rd stage more than 20min.

Regarding mode of delivery in the interventional group, 140(93.3%) had normal delivery with episiotomy and 10(6.7%) had forceps delivery where as in the control group 141 (94.0%) had normal delivery with episiotomy and 9(6.0 %) had forceps delivery.

When comparing sex of the child in the interventional group, 89(59.3%) delivered male baby, 61(40.7%) delivered female baby, where as in the control group 87(58.0%) delivered male baby, 68(42.0 %) delivered female baby,

Regarding birth weight of the baby in the interventional group 11(7.3%) had delivered baby weighing less than 1.5Kgs, 57(38.0%) had delivered baby weighing between 1.5-2.0 Kgs, 79(52.7%) had delivered baby weighing between 2.1-3.0Kgs, 3(2.0%) delivered baby weighing between 3.1-3.5Kgs, where as in the control group 10(6.7 %) had delivered baby weighing less than 1.5Kgs, 60(40.0 %) had delivered baby weighing between 1.5-2.0 Kgs, 77(51.3%) had delivered baby weighing between 2.1-3.0 Kgs, and 3(2.0%) had delivered baby weighing between 3.1-3.5 Kgs.

While discussing about the presence of congenital abnormalities of the child, in the interventional group 14(9.3%) had congenital abnormalities for their babies, 136(90.7%) had no congenital abnormalities for their babies, where as in the control group 13(8.7 %) had congenital abnormalities for their babies, 137(91.3%) had no congenital abnormalities for their babies.

When comparing the health status of the child, in the interventional group 126(84.0 %) of the mothers had healthy child, 24(16.0 %) of the mothers had child who were sick, where as in the control group 127(84.7 %) of the mothers had healthy child, 23(15.3 %) of the mothers had child who were sick.

While mentioning the history of any complications during pregnancy, in the interventional group 5(3.3%) had problems during pregnancy, 145(96.7%) had no problems during pregnancy, whereas in the control group 6(4.0 %) had problems during pregnancy, 144(96.0%) had no problems during pregnancy.

While stating the family history of any complications during pregnancy, in the interventional group 3(2.0%) had a family history of complications during pregnancy, 147(98.0%) had no family history of complications during pregnancy, whereas in the control group 3(2.0 %) had a family history of complications during pregnancy, 147(98.0%) had no family history of complications during pregnancy.

SECTION - II

Table: 3 Distribution of postnatal mothers according to their level of Postnatal Blues in the Interventional and Control group.

N = 300

Level of Postnatal Blues	Group				χ^2
	Interventional Group n = 150		Control Group n= 150		
	f	%	f	%	
No Postnatal Blues	66	44.0%	20	13.3%	
Mild Postnatal Blues	49	32.7%	21	14.0%	**χ^2=75.6 *****
Moderate Postnatal Blues	17	11.3%	69	46.0%	
Severe Postnatal Blues	18	12.0%	40	26.7%	

***** p=0.001**

Table 3 Portrays the distribution of postnatal mothers according to their post - test level of postnatal blues in the interventional group and control group. In the Interventional group 66 (44%) of the postnatal mothers had no postnatal blues, 49 (32.7%) of them had mild postnatal blues, 17 (11.3%) of them had moderate postnatal blues and 18 (12%) of them had severe blues in the post test after 10 sessions Complementary and alternative therapies. Whereas in the control group 20 (13.3%) of the postnatal mothers had no postnatal blues, 21 (14%) of them had mild postnatal blues, 69 (46%) of them had moderate postnatal blues and 40 (26.7%) of them had severe blues in the post - test.

The $\chi 2$=75.6 showed a difference in the level of postnatal blues between the interventional and the control group which also depicts that Complementary and alternative therapies was the reason for the differences between the groups and was effective at p=0.001***level.

Figure 2 Distribution of postnatal mothers according to level of postnatal blues

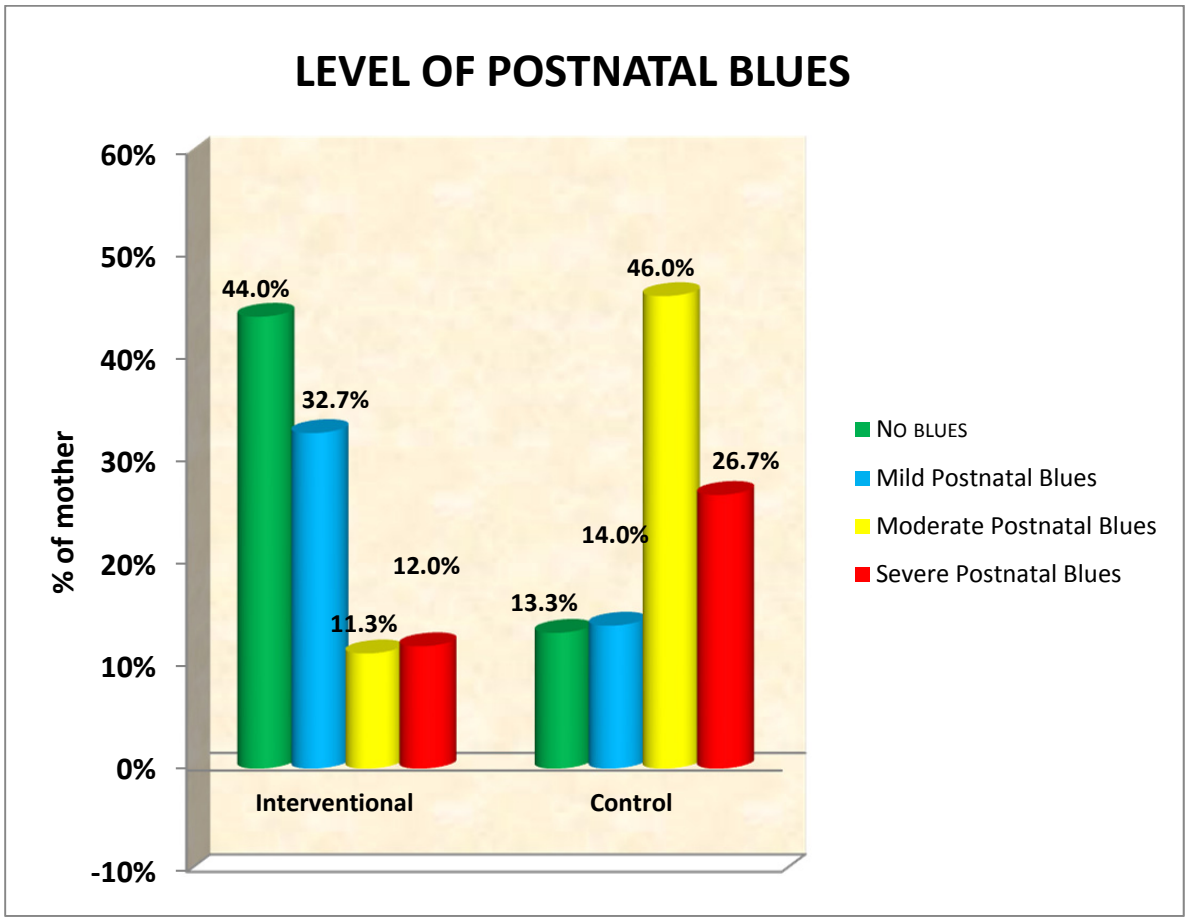


Fig 2 quotes the distribution of postnatal mothers according to their level of postnatal blues. Majority of the postnatal mothers in the Interventional group 66 (44%) had no postnatal blues whereas in the control group majority of them 69 (46%) had moderate postnatal blues.

Table 4: Comparison of Mean postnatal blues score between the interventional and the control group.

N = 300

Group	N	Mean	Standard Deviation	Student independent t-test
Interventional	150	45.37	22.23	**t=9.74 *****
Control	150	70.34	22.15	

***** p=0.001**

The above table 4 depicts the comparison of mean postnatal blue scores between the interventional and the control group. The post - test mean postnatal blue scores was 45.37 with a standard deviation of 22.23 in the interventional group, where as the post - test mean postnatal blue scores in the control group was 70.34 with a standard deviation of 22.15.

The independent "t" test was done to find out the difference between the interventional and the control group. The independent "t" 9.74, was greater than the table value which was significant at 0.001 level. There was a significant difference in the post - test mean postnatal blue scores between the interventional group and the control group. This shows that the difference in the scores was due to the intervention (complementary and alternative therapies) and also this proves that the intervention was effective in reducing the postnatal blues among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

Figure 3 Comparison of mean post - test postnatal blue scores between the interventional and control group

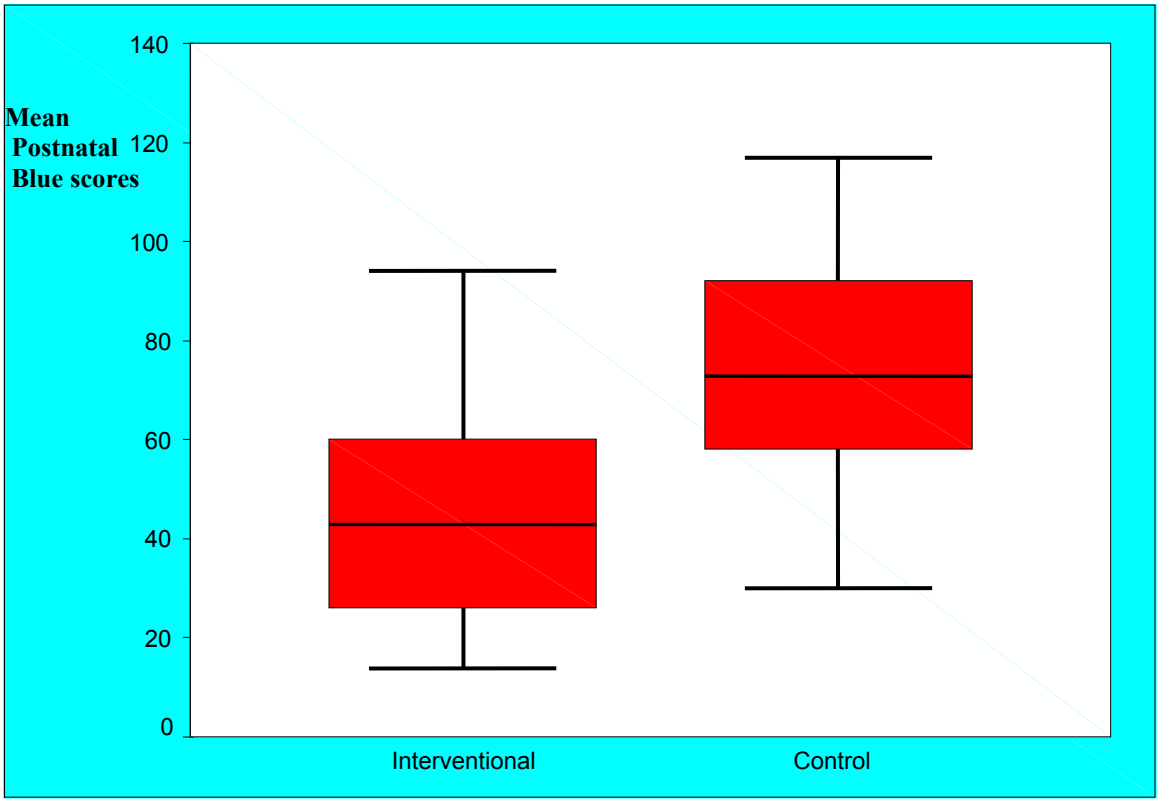


Fig 3 portrays the mean post - test postnatal blue scores among the postnatal mothers between interventional group and control group. The post - test mean postnatal blue scores was 45.37 with a standard deviation of 22.23 in the interventional group, where as the post - test mean postnatal blue scores in the control group was 70.34 with a standard deviation of 22.15.

Table 5: Question wise response of postnatal blue scores among the postnatal mothers in the interventional group.

N = 150

	Feelings of postnatal Mothers	None		Seldom		Often		Always	
		f	%	f	%	f	%	f	%
1	I feel like crying continuously without able to stop	138	92.0%	9	6.0%	3	2.0%	0	0.0%
2	I feel mentally tensed up.	93	62.0%	37	24.7%	3	2.0%	17	11.3%
3	I feel that I am able to concentrate on the things happening.	102	68.0%	24	16.0%	11	7.3%	13	8.7%
4	I feel that I am contended and lovable.	75	50.0%	42	28.0%	13	8.7%	20	13.3%
5	I have feelings of elation	76	50.7%	14	9.3%	34	22.7%	26	17.3%
6	I am feeling helpless	93	62.0%	11	7.3%	30	20.0%	16	10.7%
7	I find difficult to show and express my feelings	91	60.7%	37	24.7%	19	12.7%	3	2.0%
8	I feel that I am being alert	91	60.7%	12	8.0%	37	24.7%	10	6.7%
9	I forget things easily and feel like being muddled	82	54.7%	50	33.3%	17	11.3%	1	.7%
10	I am feeling anxious and apprehended.	90	60.0%	37	24.7%	22	14.7%	1	.7%
11	I feel that I want to be alone	99	66.0%	23	15.3%	27	18.0%	1	.7%
12	I feel that I am mentally relaxed	97	64.7%	21	14.0%	23	15.3%	9	6.0%
13	I feel hopeful and have optimistic ideas.	82	54.7%	26	17.3%	17	11.3%	25	16.7%
14	I feel sorry for myself.	5	63.3%	35	23.3%	9	6.0%	11	7.3%
15	I am feeling emotionally numb and without any feelings	100	66.7%	31	20.7%	18	12.0%	1	7%
16	I am feeling depressed	89	59.3%	40	26.7%	20	13.3%	1	.7%
17	I have good relationship with my family members, husband,	74	49.3%	20	13.3%	43	28.7%	13	8.7%
18	I am feeling happy	92	61.3%	39	26.0%	17	11.3%	2	1.3%
19	I feel confident	101	67.3%	20	13.3%	23	15.3%	6	4.0%

20	I am changeable in my spirits according to the situation.	80	53.3%	50	33.3%	11	7.3%	9	6.0%
21	I have feelings of tiredness	78	52.0%	55	36.7%	10	6.7%	7	4.7%
22	I feel irritable	89	59.3%	35	23.3%	22	14.7%	4	2.7%
23	I feel that I have adequate rest and adequate sleep	71	47.3%	40	26.7%	19	12.7%	20	13.3%
24	I feel being lively	90	60.0%	37	24.7%	9	6.0%	14	9.3%
25	I have feelings of over sensitiveness.	73	48.7%	26	17.3%	46	30.7%	5	3.3%
26	I suffer with frequent mood changes	101	67.3%	29	19.3%	19	12.7%	1	.7%
27	I feel restless	90	60.0%	43	28.7%	16	10.7%	1	.7%
28	I feel that I am being calm and tranquil	105	70.0%	21	14.0%	21	14.0%	3	2.0%
29	I feel that I am motivated and lively in accomplishing my goals	93	62.0%	41	27.3%	9	6.0%	7	4.7%
30	I feel that I am self confident and have self respect	116	77.3%	16	10.7%	17	11.3%	1	.7%

Table 5 depicts the question wise response of postnatal blue scores among the postnatal mothers in the interventional group.

When comparing the question wise response of the postnatal blues among the postnatal mothers, 132(92%) of the postnatal mothers in the interventional group had no problems such as crying continously without being able to stop. 91(60.7%) of the postnatal mothers had no difficulty in expressing their feelings. 90(60%) of the postnatal mothers were not feeling apprehensive or tension. 89(59.3%) had no depressive thoughts. 78(52%) and 89(59.3%) of the postnatal mothers did not feel tiredness and irritable respectively.

Whereas on the other hand 102(68%) of the postnatal mothers found difficulty in concentrating on things happening around them. 97(64.7%) of the postnatal mothers were not mentally relaxed. 82(54.7%) of the postnatal mothers did not have optimistic ideas. 74(49.3%) of the postnatal mothers did not have a cordial relationship with their husband and their family members. 93(62%) of the postnatal mothers felt that they were not motivated in accomplishing their goals and 116(77.3%) of the postnatal mothers felt that they lacked in self confidence and also felt that they didn't have self respect.

Table 6: Question wise response of percentage of postnatal blue scores among the postnatal mothers in the control group.

N = 150

	Feelings of postnatal Mothers	None		Seldom		Often		Always	
		f	%	f	%	f	%	f	%
1	I feel like crying continuously without able to stop	74	49.3%	45	30.0%	31	20.7%	0	0.0%
2	I feel mentally tensed up.	49	32.7%	29	19.3%	44	29.3%	28	18.7%
3	I feel that I am able to concentrate on the things happening.	38	25.3%	26	17.3%	55	36.7%	31	20.7%
4	I feel that I am contended and lovable.	36	24.0%	36	24.0%	38	25.3%	40	26.7%
5	I have feelings of elation	43	28.7%	26	17.3%	35	23.3%	46	30.7%
6	I am feeling helpless	49	32.7%	28	18.7%	49	32.7%	24	16.0%
7	I find difficult to show and express my feelings	39	26.0%	49	32.7%	42	28.0%	20	13.3%
8	I feel that I am being alert	44	29.3%	26	17.3%	54	36.0%	26	17.3%
9	I forget things easily and feel like being muddled	35	23.3%	47	31.3%	56	37.3%	12	8.0%
10	I am feeling anxious and apprehended.	45	30.0%	40	26.7%	42	28.0%	23	15.3%
11	I feel that I want to be alone	59	39.3%	50	33.3%	31	20.7%	10	6.7%
12	I feel that I am mentally relaxed	49	32.7%	25	16.7%	46	30.7%	30	20.0%
13	I feel hopeful and have optimistic ideas.	34	22.7%	35	23.3%	36	24.0%	45	30.0%
14	I feel sorry for myself.	38	25.3%	44	29.3%	37	24.7%	31	20.7%
15	I am feeling emotionally numb and without any feelings	46	30.7%	47	31.3%	53	35.3%	4	2.7%
16	I am feeling depressed	51	34.0%	39	26.0%	46	30.7%	14	9.3%
17	I have good relationship with my family members, husband,	27	18.0%	33	22.0%	55	36.7%	35	23.3%
18	I am feeling happy	47	31.3%	29	19.3%	43	28.7%	31	20.7%
19	I feel confident	52	34.7%	38	25.3%	36	24.0%	24	16.0%

20	I am changeable in my spirits according to the situation.	38	25.3%	43	28.7%	45	30.0%	24	16.0%
21	I have feelings of tiredness	45	30.0%	35	23.3%	37	24.7%	33	22.0%
22	I feel irritable	46	30.7%	34	22.7%	52	34.7%	18	12.0%
23	I feel that I have adequate rest and adequate sleep	29	19.3%	27	18.0%	32	21.3%	62	41.3%
24	I feel being lively	46	30.7%	31	20.7%	49	32.7%	24	16.0%
25	I have feelings of over sensitiveness.	33	22.0%	36	24.0%	58	38.7%	23	15.3%
26	I suffer with frequent mood changes	43	28.7%	40	26.7%	50	33.3%	17	11.3%
27	I feel restless	40	26.7%	38	25.3%	64	42.7%	8	5.3%
28	I feel that I am being calm and tranquil	48	32.0%	25	16.7%	53	35.3%	24	16.0%
29	I feel that I am motivated and lively in accomplishing my goals	45	30.0%	45	30.0%	49	32.7%	11	7.3%
30	I feel that I am self confident and have self respect	52	34.7%	40	26.7%	31	20.7%	27	18.0%

Table 6 portrays the question wise response of postnatal blue scores among the postnatal mothers in the control group.

When comparing the question wise response of the postnatal blues among control group. 74(49.3%) of the postnatal mothers in the control group did not feel like crying continously without being able to stop. 59(39.3%) of the postnatal mothers did not want to be alone. 55(36.7%) of the postnatal mothers had good relationship with their husband and their family members. 45(30%) of the postnatal mothers felt hopeful and had optimistic ideas. 62(41.3%) of the postnatal mothers in the control group felt that they had adequate rest and sleep.

Whereas on the other hand 52(34.7%) of the postnatal mothers in the control group felt that they were not confident. 44(29.3%) of the postnatal mothers were mentally tensed up. 50(33.3%) of the post natal mothers suffered with frequent mood changes. 64(42.7%) of the postnatal mothers felt they were restless and 49(32.7%) were not mentally not relaxed. 52(34.7%) of the postnatal mothers in the control group felt that they were not confident.

Table 7: Comparison of question wise mean, SD postnatal blue scores among the postnatal mothers between the interventional and the control group

N = 300

	Feelings of postnatal Mothers	Interventional Group		Control Group		Student independent t- test
		Mean	SD	Mean	SD	
1	I feel like crying continuously without able to stop	1.00	.36	1.71	.79	t=8.65***
2	I feel mentally tensed up.	1.53	.98	2.34	1.12	t=5.86***
3	I feel that I am able to concentrate on the things happening.	1.47	.96	2.53	1.08	t=8.12***
4	I feel that I am contended and lovable.	1.75	1.05	2.55	1.13	t=5.50***
5	I have feelings of elation	1.97	1.20	2.56	1.20	t=3.56***
6	I am feeling helpless	1.69	1.10	2.32	1.09	t=4.15***
7	I find difficult to show and express my feelings	1.46	.79	2.29	1.00	t=6.98***
8	I feel that I am being alert	1.67	1.04	2.41	1.09	t=5.21***
9	I forget things easily and feel like being muddled	1.48	.72	2.30	.92	t=7.50***
10	I am feeling anxious and apprehended.	1.46	.76	2.29	1.06	t=6.82***
11	I feel that I want to be alone	1.43	.81	1.95	.93	t=4.10***
12	I feel that I am mentally relaxed	1.43	.95	2.38	1.14	t=6.21***
13	I feel hopeful and have optimistic ideas.	1.77	1.15	2.61	1.14	t=5.39***
14	I feel sorry for myself.	1.57	.90	2.41	1.08	t=7.25 ***
15	I am feeling emotionally numb and without any feelings	1.37	.73	2.10	.87	t=6.81***
16	I am feeling depressed	1.45	.75	2.15	1.00	t=5.88***
17	I have good relationship with my family members, husband,	1.67	1.06	2.65	1.03	t=5.67***
18	I am feeling happy	1.43	.75	2.39	1.13	t=7.75***
19	I feel confident	1.46	.89	2.21	1.09	t=5.67***

20	I am changeable in my spirits according to the situation.	1.56	.86	2.37	1.03	t=6.44***
21	I have feelings of tiredness	1.54	.81	2.39	1.13	t=6.57***
22	I feel irritable	1.51	.83	2.28	1.03	t=6.22***
23	I feel that I have adequate rest and adequate sleep	1.62	1.07	2.85	1.16	t=7.19***
24	I feel being lively	1.55	.96	2.34	1.08	t=5.88***
25	I have feelings of over sensitiveness.	1.69	.96	2.47	1.00	t=5.18***
26	I suffer with frequent mood changes	1.37	.74	2.27	1.00	t=7.93***
27	I feel restless	1.42	.71	2.27	.92	t=7.87***
28	I feel that I am being calm and tranquil	1.38	.81	2.35	1.09	t=7.86***
29	I feel that I am motivated and lively in accomplishing my goals	1.43	.81	2.17	.95	t=6.29***
30	I feel that I am self confident and have self respect	1.25	.71	2.22	1.11	t=8.06***

Table 7 compares question wise postnatal blues scores among the postnatal mothers between the interventional and the control group.

The mean post - test question wise scores of postnatal blues among postnatal mothers in the interventional group was lesser than the mean post - test question wise scores of postnatal blues among postnatal mothers in the control group. This shows that there was a statistically significant difference in the question wise postnatal blues scores.

Independent “t” test was done to find out the difference between the interventional and the control group. The findings revealed that statistically there was a significant difference between interventional and control group of postnatal mothers. Thus it can be proved that the difference between the interventional and the control group was due to the intervention (complementary and alternative therapies) which had an impact on the question wise blue scores. Thus it can be inferred that 10 sessions of complementary and alternative therapies along with routine care was beneficial to the postnatal mothers.

Figure 4 Comparison of question wise percentage of postnatal blue scores between the interventional and control group

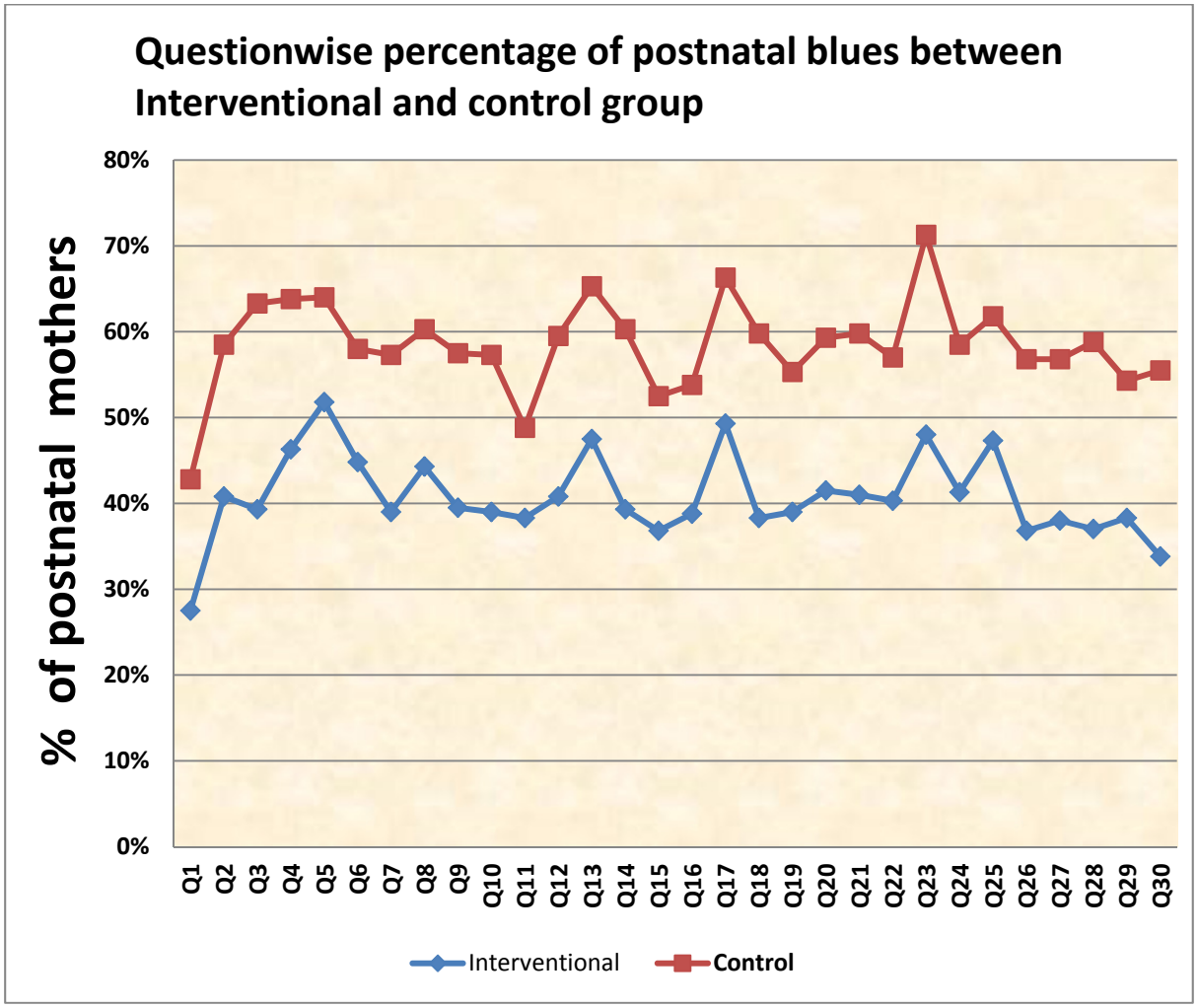


Fig 4 depicts the comparison of question wise postnatal blue scores between the interventional and the control group.

Table: 8 Distribution of postnatal mothers according to their level of self - esteem in the Interventional and Control group.

N = 300

Level of Maternal Self - esteem	Group				χ^2
	Interventional Group n = 150		Control Group n= 150		
	f	%	f	%	
Low	26	17.3%	76	50.6%	
Moderate	34	22.7%	54	36.0%	$\chi2$=73.6 ***
Good	90	60.0%	20	13.3%	

*** p=0.001

Table 8 Depicts the distribution of postnatal mothers according to their post - test level of maternal self - esteem in the interventional group and control group. While comparing the level of maternal self - esteem in the interventional group 26(17.3%) of the postnatal mothers had low maternal self - esteem, 34(22.7%) of them had moderate maternal self - esteem, and 90(60%) of them had a good maternal self - esteem after 10 sessions of Complementary and alternative therapies, whereas in the control group 76(50.6%) of the postnatal mothers had low maternal self - esteem, 54(36%) of them had moderate maternal self - esteem, and only 20(13.3%) of the postnatal mothers had a good maternal self - esteem.

The $\chi2$=73.6 showed a difference in the level of maternal self - esteem between the interventional and the control group, which also depicts that complementary and alternative therapies was the reason for the differences between the groups and was effective at p=0.001***level.

Figure 5 Distribution of postnatal mothers according to level of self - esteem

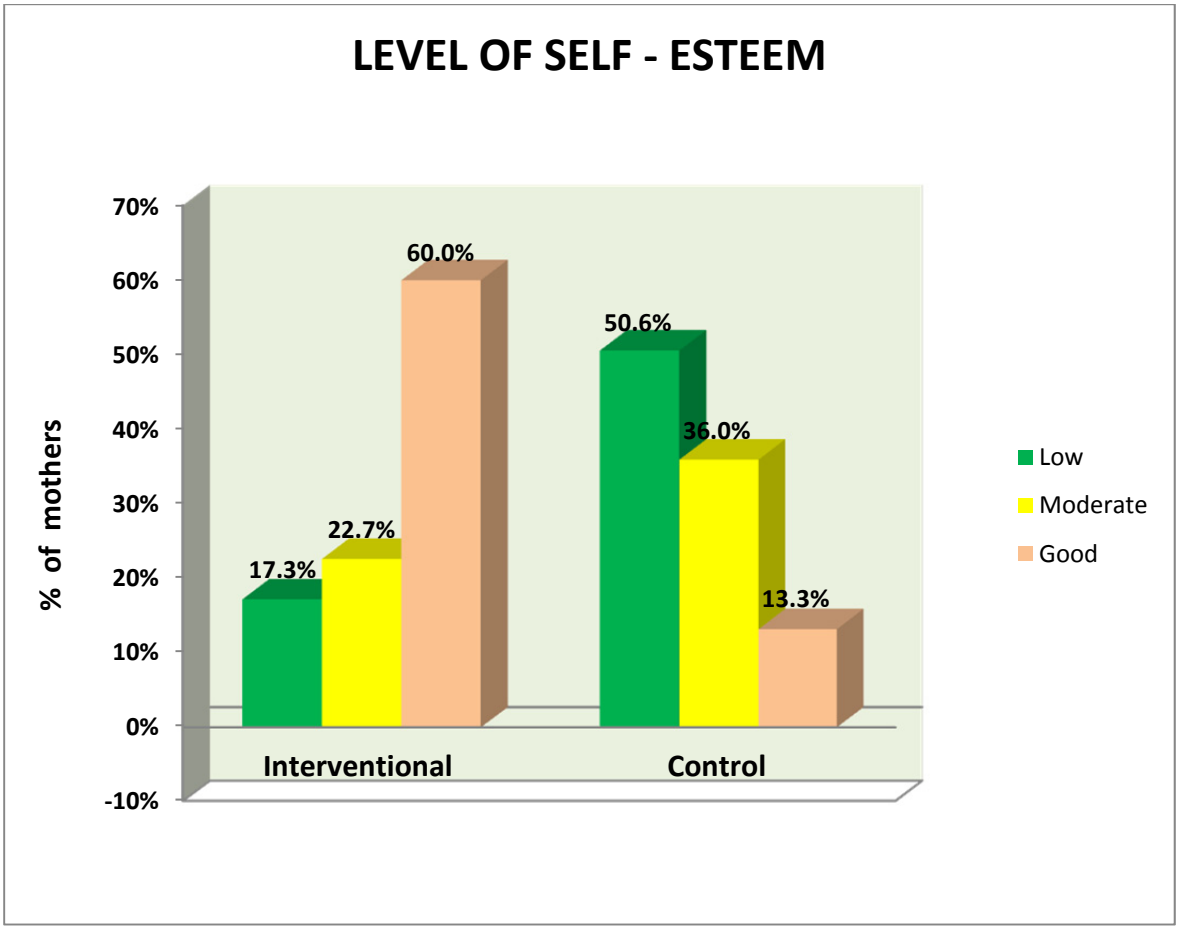


Fig 5 quotes the distribution of postnatal mothers according to their level of self – esteem. 26(17.3%) of the postnatal mothers had low maternal self - esteem, 34(22.7%) of them had moderate maternal self - esteem, and 90(60%) of them had good maternal self - esteem in the interventional group, whereas in the control group 76(50.6%) of the postnatal mothers had low maternal self - esteem, 54(36%) of them had moderate maternal self - esteem, and only 20(13.3%) of the postnatal mothers had a good maternal self - esteem.

Table 9: Comparison of post - test maternal self - esteem score between the interventional group and the control group

N = 300

Group	N	Mean	Standard. Deviation	Student Independent t-test
Interventional	150	76.05	16.83	t=13.89***
Control	150	50.19	15.38	

***** p=0.001**

The above table 9 depicts the comparison of mean maternal self - esteem scores between the interventional and the control group. The post - test mean maternal self - esteem scores was 76.05 with a standard deviation of 16.83 in the interventional group, where as the post - test mean maternal self - esteem scores in the control group was 50.19 with a standard deviation of 15.38

Independent "t" test was done to rule out the difference between the interventional and the control group. The calculated Independent "t" was 13.89 and it was greater than the table value which was significant at 0.001 level. There was a significant difference in the mean post - test maternal self - esteem scores between the interventional group and the control group. This shows that the difference in the scores was due to the intervention (complementary and alternative therapies) and also this proves that the intervention was effective in improving the maternal self - esteem among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

Figure 6 Comparison of mean post - test self - esteem scores of the postnatal mothers between the interventional group and control group

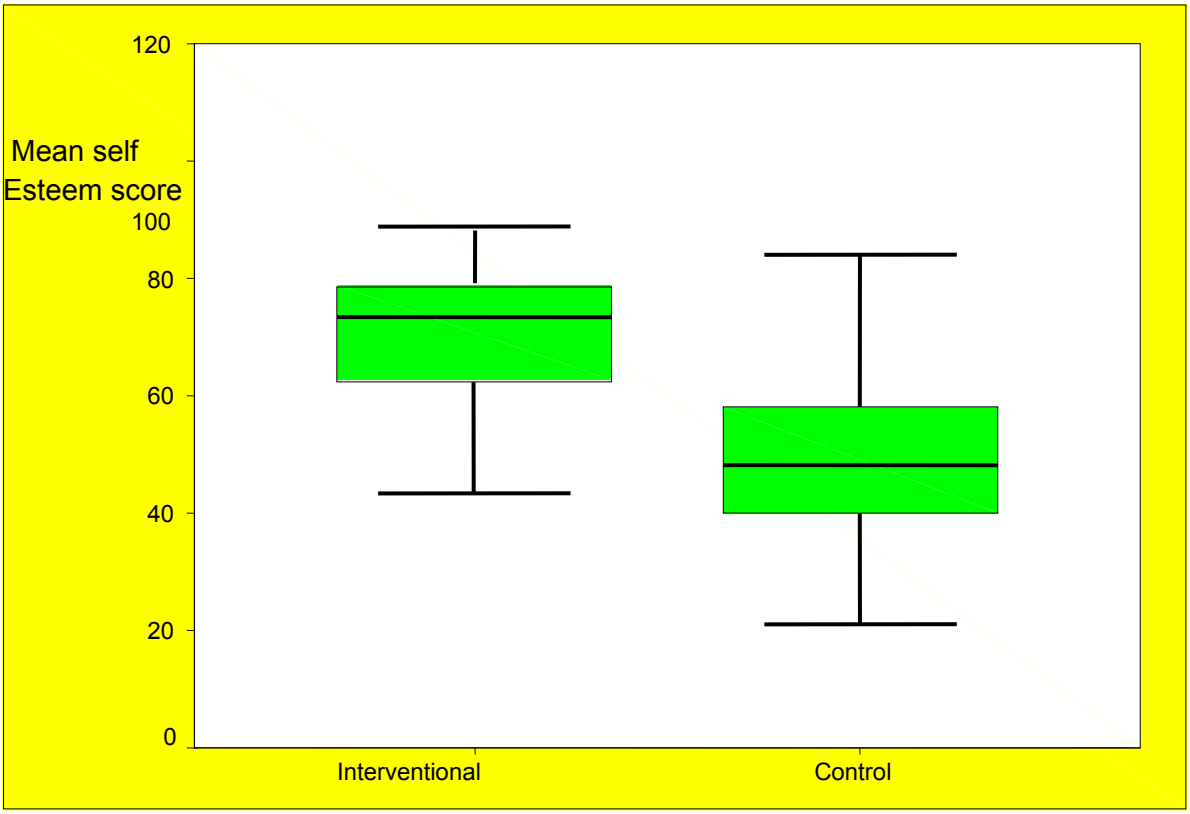


Fig 6 portrays the mean post - test self - esteem scores of the postnatal mothers. The post - test mean maternal self - esteem scores was 76.05 with a standard deviation of 16.83 in the interventional group, where as the post - test mean maternal self - esteem scores in the control group was 50.19 with a standard deviation of 15.38

Table 10: Question wise response of maternal self - esteem scores among the postnatal mothers in the interventional group.

N = 150

S.No	Feelings of postnatal Mothers	Strongly agree		Agree		Disagree		Strongly disagree	
		f	%	f	%	f	%	f	%
1	I took good care of myself during my pregnancy	26	17.3%	16	10.7%	76	50.7%	32	21.3%
2	I felt that delivery and labor was one of the best experience of my life	21	14.0%	19	12.7%	78	52.0%	32	21.3%
3	I feel that being a mother will be a very rewarding experience	26	17.3%	14	9.3%	82	54.7%	28	18.7%
4	I felt that I was emotionally prepared for my baby's birth	0	0%	27	18.0%	69	46.0%	54	36.0%
5	I feel guilty about delivering a baby into this world which is full of troubles.	0	0%	27	18.0%	98	65.3%	25	16.7%
6	I do not mind staying at home to care for my baby	0	0%	27	18.0%	66	44.0%	57	38.0%
7	I feel like I am a failure as a mother	10	6.7%	17	11.3%	84	56.0%	39	26.0%
8	I feel confident that I will be able to teach my baby new things.	10	6.7%	17	11.3%	78	52.0%	45	30.0%
9	I feel adequate to care for my baby	10	6.7%	16	10.7%	85	56.7%	39	26.0%
10	I feel that mothering is not as fulfilling as I thought to be.	21	14.0%	5	3.3%	92	61.3%	32	21.3%

11	I do not feel emotionally secure enough to care for my baby by myself	21	14.0%	5	3.3%	109	72.7%	15	10.0%
12	I am confident that my baby will be strong and healthy	0	0%	35	23.3%	80	53.3%	35	23.3%
13	I am disappointed with the sex of my baby	11	7.3%	37	24.7%	91	60.7%	11	7.3%
14	I am concerned about whether my baby will develop normally	10	6.7%	33	22.0%	86	57.3%	21	14.0%
15	I worry about whether my baby will like me.	21	14.0%	9	6.0%	86	57.3%	34	22.7%
16	I am confident that I will have a close and warm relationship with my baby	10	6.7%	16	10.7%	83	55.3%	41	27.3%
17	I need more time to adjust to my baby	0	0%	28	18.7%	83	55.3%	39	26.0%
18	I expect that I will be at least a good mother as my mother was.	20	13.3%	8	5.3%	68	45.3%	54	36.0%
19	All in all, I am inclined to feel that I am a failure.	16	10.7%	12	8.0%	91	60.7%	31	20.7%
20	I looked forward to breast feeding my baby	0	0%	1	.7%	97	64.7%	52	34.7%
21	I worry about being able to fulfill my baby's emotional needs	13	8.7%	16	10.7%	71	47.3%	50	33.3%
22	I am worried that my figure will change after delivery	29	19.3%	28	18.7%	77	51.3%	16	10.7%
23	I feel as though I have plenty of energy to take care of my baby	0	0%	43	28.7%	81	54.0%	26	17.3%
24	I feel that I am not worthy as equally as others or when compared with others.	15	10.0%	14	9.3%	85	56.7%	36	24.0%
25	I felt that I looked very good during my pregnancy	30	20.0%	4	2.7%	79	52.7%	37	24.7%

Table 10 quotes the question wise response of maternal self - esteem scores among the postnatal mothers in the interventional group.

When comparing the question wise response of the maternal self - esteem among the postnatal mothers, 76(50.7%) of the postnatal mothers in the interventional group did not care themselves well during pregnancy. 82(54.7%) of the postnatal mothers felt that pregnancy and delivery was not a rewarding experience. 81(54%) of the postnatal mothers felt that they did not have energy to take care of their babies. 83(55.3%) of the postnatal mothers felt that they were not confident and they had problems in having a warm relation with their babies. 78(52%) of the postnatal mothers felt that they were not confident to teach their babies new things. 85(56.7%) of the postnatal mothers in the interventional group felt that they not adequate to care their babies.

Whereas 91(60.7%) of the postnatal mothers were not disappointed with the sex of the child. 86(57.3%) of the postnatal mothers felt that they didn't worry whether their baby will develop normally. 83(53.3%) of the postnatal mothers did not need more time to adjust towards their baby. 84(56%) of the postnatal mothers felt that they were not a failure as a mother. 109(72.7%) of the postnatal mothers felt that they were emotionally secure to care for their babies. 86(57.3%) of the postnatal mothers did not worry whether their baby will like them and 77(51.3%) of the postnatal mothers in the interventional group them felt that they did not worry about their figure or body image would change after the delivery.

Table 11: Question wise response of maternal self - esteem scores among the postnatal mothers in the control group.

N = 150

S. No	Feelings of postnatal Mothers	Strongly agree		Agree		Disagree		Strongly disagree	
		f	%	f	%	f	%	f	%
1	I took good care of myself during my pregnancy	57	38.0%	46	30.7%	42	28.0%	5	3.3%
2	I felt that delivery and labor was one of the best experience of my life	51	34.0%	50	33.3%	45	30.0%	4	2.7%
3	I feel that being a mother will be a very rewarding experience	55	36.7%	46	30.7%	44	29.3%	5	3.3%
4	I felt that I was emotionally prepared for my baby's birth	57	38.0%	49	32.7%	39	26.0%	5	3.3%
5	I feel guilty about delivering a baby into this world which is full of troubles.	64	42.7%	45	30.0%	35	23.3%	6	4.0%
6	I do not mind staying at home to care for my baby	26	17.3%	74	49.3%	46	30.7%	4	2.7%
7	I feel like I am a failure as a mother	37	24.7%	59	39.3%	51	34.0%	3	2.0%
8	I feel confident that I will be able to teach my baby new things.	28	18.7%	72	48.0%	45	30.0%	5	3.3%
9	I feel adequate to care for my baby	27	18.0%	71	47.3%	43	28.7%	9	6.0%
10	I feel that mothering is not as fulfilling as I thought to be.	44	29.3%	59	39.3%	42	28.0%	5	3.3%

11	I do not feel emotionally secure enough to care for my baby by myself	45	30.0%	62	41.3%	42	28.0%	1	.7%
12	I am confident that my baby will be strong and healthy	37	24.7%	76	50.7%	36	24.0%	1	.7%
13	I am disappointed with the sex of my baby	47	31.3%	58	38.7%	42	28.0%	3	2.0%
14	I am concerned about whether my baby will develop normally	41	27.3%	73	48.7%	35	23.3%	1	.7%
15	I worry about whether my baby will like me.	21	14.0%	67	44.7%	60	40.0%	2	1.3%
16	I am confident that I will have a close and warm relationship with my baby	21	14.0%	75	50.0%	46	30.7%	8	5.3%
17	I need more time to adjust to my baby	34	22.7%	74	49.3%	34	22.7%	8	5.3%
18	I expect that I will be at least a good mother as my mother was.	41	27.3%	68	45.3%	33	22.0%	8	5.3%
19	All in all, I am inclined to feel that I am a failure.	39	26.0%	66	44.0%	41	27.3%	4	2.7%
20	I looked forward to breast feeding my baby	18	12.0%	62	41.3%	65	43.3%	5	3.3%
21	I worry about being able to fulfill my baby's emotional needs	35	23.3%	80	53.3%	26	17.3%	9	6.0%
22	I am worried that my figure will change after delivery	71	47.3%	47	31.3%	24	16.0%	8	5.3%
23	I feel as though I have plenty of energy to take care of my baby	26	17.3%	93	62.0%	27	18.0%	4	2.7%
24	I feel that I am not worthy as equally as others or when compared with others.	28	18.7%	76	50.7%	43	28.7%	3	2.0%
25	I felt that I looked very good during my pregnancy	61	40.7%	51	34.0%	33	22.0%	5	3.3%

Table 11 depicts the question wise response of maternal self - esteem scores among the postnatal mothers in the control group.

When comparing the question wise response of the maternal self - esteem among the postnatal mothers in the control group, 42(28%) of the postnatal mothers in the control group felt that they did not care themselves well during pregnancy. 64(42.7%) of the postnatal mothers felt guilty of delivering a baby into this world full of troubles. 59(39.3%) of the postnatal mothers felt that they were a failure as a mother. 73(48.7%) of the postnatal mothers were worried about whether their baby will develop normally. 80(53.3%) of the postnatal mothers were worried that they were not able to meet the emotional needs of the baby and 71(43.7%) of the postnatal mothers in the control group were worried that their figure and body image would change after delivery.

Whereas on the other hand 51(34%) of the postnatal mothers in the control group felt that delivery and labour was one of the best experience in their life. 76(50.7%) of the postnatal mothers were confident that their baby will be strong and healthy. 57(38%) of the postnatal mothers felt that they were emotionally prepared for their baby's birth. 74(49.3%) of the postnatal mothers were willing to stay at home to care for their baby. 93(62%) of the postnatal mothers felt that they had plenty of energy to take care of their baby.

Table 12: Comparison of question wise self - esteem scores among the postnatal mothers between the interventional and the control group.

N = 300

S. No	Feelings of postnatal Mothers	Interventional		Control		Student independent t- test
		Mean	SD	Mean	SD	
1	I took good care of myself during my pregnancy	2.86	.98	1.97	.89	t=7.32***
2	I felt that delivery and labor was one of the best experience of my life	2.91	.93	2.01	.87	t=7.63***
3	I feel that being a mother will be a very rewarding experience	2.85	.96	1.99	.89	t=7.04***
4	I felt that I was emotionally prepared for my baby's birth	3.28	.71	1.95	.88	t=13.31***
5	I feel guilty about delivering a baby into this world which is full of troubles.	3.09	.59	1.89	.90	t=12.50***
6	I do not mind staying at home to care for my baby	3.3	.72	2.19	.75	t=11.94***
7	I feel like I am a failure as a mother	3.11	.80	2.13	.81	t=9.46***
8	I feel confident that I will be able to teach my baby new things.	3.15	.83	2.18	.77	t=9.48***
9	I feel adequate to care for my baby	3.12	.80	2.23	.81	t=8.53***
10	I feel that mothering is not as fulfilling as I thought to be.	3.1	.90	2.05	.84	t=8.44***
11	I do not feel emotionally secure enough to care for my baby by myself	2.89	.81	1.99	.78	t=8.65***
12	I am confident that my baby will be strong and healthy	3.1	.69	2.01	.72	t=12.24***
13	I am disappointed with the sex of my baby	2.78	.72	2.01	.82	t=7.55***
14	I am concerned about whether my baby will develop normally	2.89	.76	1.97	.73	t=9.41***
15	I worry about whether my baby will like me.	2.99	.92	2.29	.72	t=6.31***
16	I am confident that I will have a close and warm relationship with my baby	3.13	.81	2.27	.77	t=8.36***

17	I need more time to adjust to my baby	3.17	.67	2.11	.81	t=11.26***
18	I expect that I will be at least a good mother as my mother was.	3.14	.98	2.05	.84	t=9.37***
19	All in all, I am inclined to feel that I am a failure.	3.01	.84	2.07	.80	t=8.92***
20	I looked forward to breast feeding my baby	3.44	.49	2.38	.74	t=13.26***
21	I worry about being able to fulfill my baby's emotional needs	3.15	.89	2.06	.80	t=10.15***
22	I am worried that my figure will change after delivery	2.63	.92	1.79	.90	t=7.02 ***
23	I feel as though I have plenty of energy to take care of my baby	2.99	.67	2.06	.68	t=10.6***
24	I feel that I am not worthy as equally as others or when compared with others.	3.05	.86	2.14	.73	t=8.75***
25	I felt that I looked very good during my pregnancy	2.92	1.02	1.88	.87	t=8.58***

Table 12 compares question wise maternal self - esteem scores among the postnatal mothers between the interventional and the control group.

The mean post - test question wise scores of maternal self - esteem among postnatal mothers in the interventional group was greater than the mean post - test question wise scores of maternal self - esteem among postnatal mothers in the control group. This shows that there was a statistically significant difference in the question wise postnatal maternal self - esteem scores.

Independent "t" test was done to find out the difference between the interventional and the control group. The findings revealed that statistically there was a significant difference between interventional and control group of postnatal mothers. Thus it can be proved that the difference between the interventional and the control group was due to the intervention (complementary and alternative therapies) which had an impact on the question wise maternal self - esteem scores. Thus it can be inferred that 10 sessions of complementary and alternative therapies along with routine care was beneficial to the postnatal mothers.

Figure 7 Comparison of question wise self - esteem scores of the postnatal mothers between the interventional group and control group

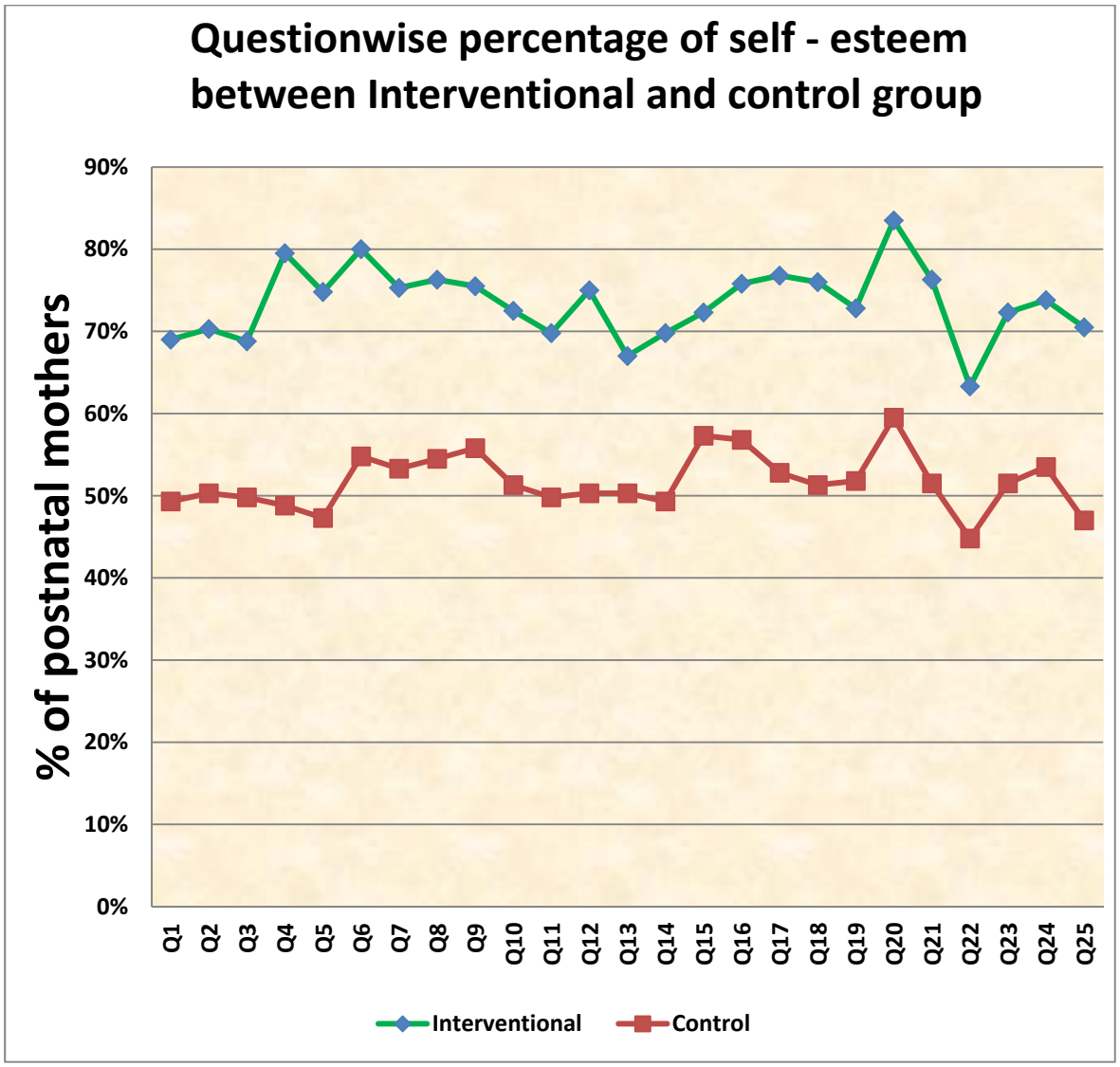


Fig 7 manifests question wise self - esteem scores of the postnatal mothers between the interventional group and control group.

SECTION - III

Table: 13 Effect of Complementary and alternative therapies on post - test level of Postnatal Blues and Maternal self - esteem among postnatal mothers between the interventional group and the Control group.

N = 300

Variable	Mean	Max Score	Mean Score	S.D	Student independent "t"	P
Postnatal Blues						
Interventional group	45.37	120	45.37	22.23	**t=9.74**	**p=0.001*** **
Control group	70.34	120	70.34	22.15		
Maternal self - esteem						
Interventional group	76.05	100	76.05	16.83	**t=13.89**	**p=0.001*** **
Control group	50.19	100	50.19	15.38		

***p < 0.001

Table: 13. Depicts the effectiveness of complementary and alternative therapies on postnatal blues and maternal self - esteem. While comparing the postnatal blues, there was a significant difference in the levels of postnatal blues between the interventional group and the control group. The post - test mean blue scores in the interventional group was 45.37 (S.D. 22.23) which was lower than the mean blue scores 70.34, (S.D. 22.15) among the postnatal mothers in the control group. The calculated 't' value 9.74 was higher than the table value which was significant at 0.001 level.

Whereas comparing the maternal self - esteem of the postnatal mothers between the interventional and the control group quotes that there was a significant difference in the levels of self - esteem between the interventional group and the control group. The post - test mean self - esteem scores in the interventional group was 76.05 (S.D. 16.83) which was higher than the mean self - esteem scores 50.19, (S.D. 15.38) among the postnatal mothers in the control group. The calculated't' value 13.89 was higher than the table value which was significant at 0.001 level. Hence, this shows that the intervention 10 sessions of complementary and alternative therapies was effective in reducing the postnatal blues and in improving the maternal self - esteem among the postnatal mothers who were admitted at govt Rajaji Hospital, Madurai.

These findings of the study was consistent with a study done by Imura[26] which revealed that mothers who received guided imagery were compared with a control group who received standard postpartum care. In the guided imagery post treatment scores significantly decreased for the maternity blues scale, the state-anxiety inventory, and all but one of the profile of mood states subscales. Results suggested that guided imagery might be an effective intervention for postpartum mothers to improve physical and mental status and to facilitate mother-infant interaction.

Figure 8 Comparison of postnatal blues and self - esteem scores of the postnatal mothers between the interventional group and control group

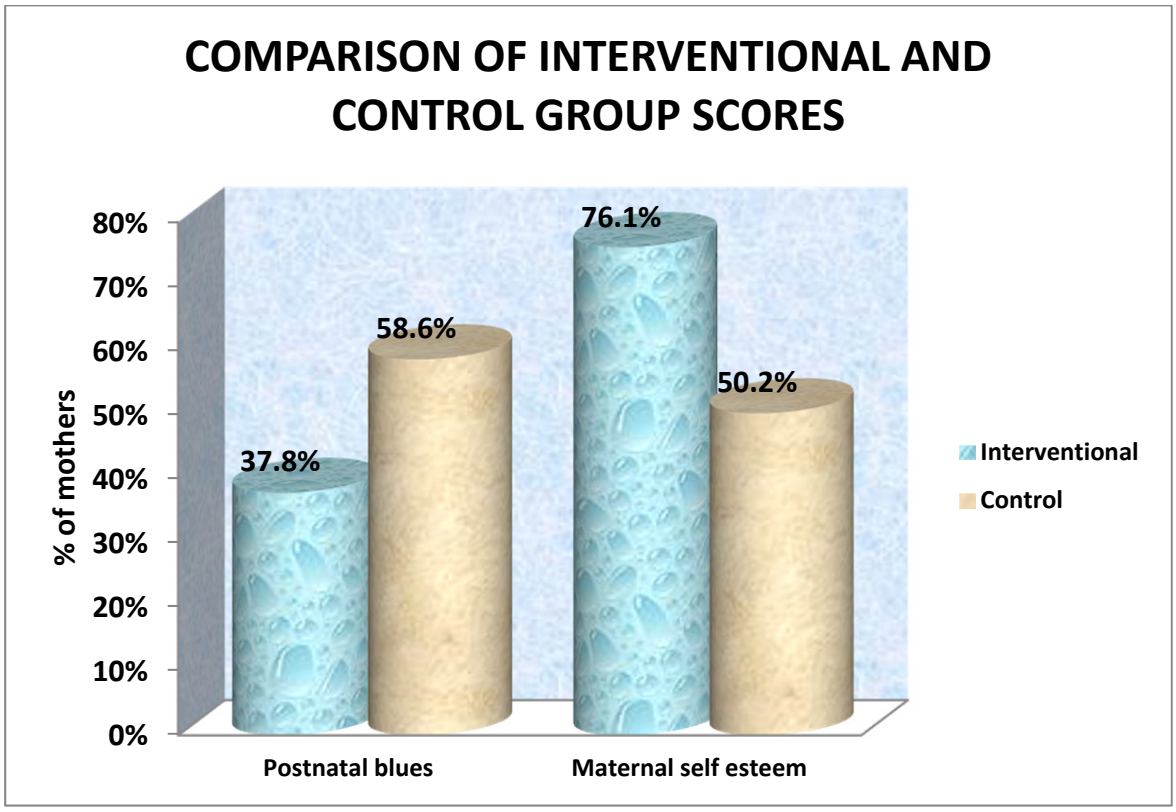


Fig 8 portrays the comparison of postnatal blue scores and self - esteem scores of the postnatal mothers between the interventional group and control group. The intervention 10 sessions of complementary and alternative therapies was effective in reducing the postnatal blues and in improving the maternal self - esteem among the postnatal mothers who were admitted at govt Rajaji Hospital, Madurai.

Table 14: Effectiveness of complementary and alternative therapies

N = 300

Variable	Group	Max score	Mean score	Mean difference with 95% Confidence interval	Percentage of mean difference with 95% Confidence interval
Postnatal blues	**Interventional**	120	45.37	24.96 (19.92 - 30.01)	20.8 % (16.6%-25.0%)
	Control	120	70.34		
Maternal self - esteem	**Interventional**	100	76.05	25.86 (22.20 - 29.52)	25.9 % (22.2% - 29.5%)
	Control	100	50.19		

Table 14 identifies the effect of complementary and alternative therapies in terms of postnatal blues and maternal self - esteem among the postnatal mothers in the interventional group.

On an average, postnatal blues among the postnatal mothers in the interventional group was reduced by 20.8% than the control group mothers. On the other hand on an average, the postnatal mother's in the interventional group gained 25.9% of maternal self - esteem than the postnatal mothers in the control group.

Differences between the interventional and the control group post - test score was analysed using proportion with 95% Confidence Interval and mean difference with 95% confidence interval.

This difference shows the effect of complementary and alternative therapies on postnatal blues and maternal self - esteem.

Figure 9 Effectiveness of the study

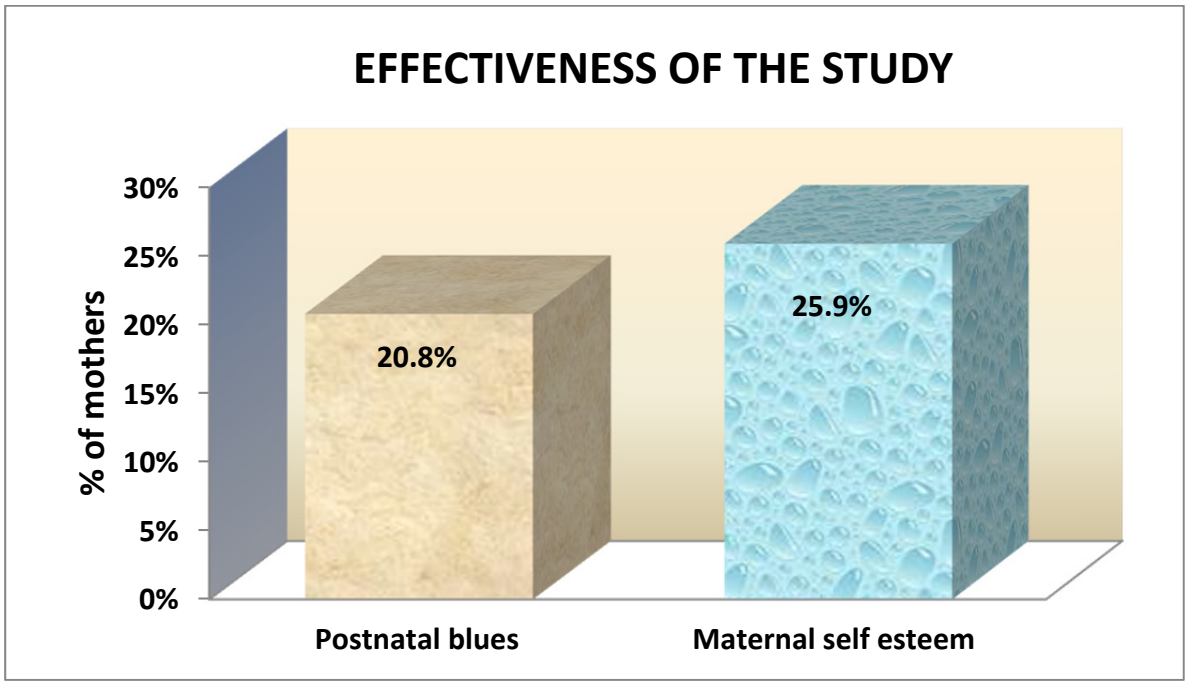


Fig 9 shows the percentage of decrease in postnatal blues and increase in self - esteem among postnatal mothers in the interventional group. On an average, postnatal mother's postnatal blues in the interventional group was reduced by 20.8% and postnatal mothers in the interventional group gained 25.9% of maternal self - esteem than the postnatal mothers in the control group.

SECTION - IV

Table 15: Association between level of postnatal blues and socio - demographic variables in the interventional group

N = 150

Socio - demographic variables		Level of postnatal blues								Total	$\chi 2$
		No Blues		Mild Postnatal Blues		Moderate Postnatal Blues		Severe Postnatal Blues			
		f	%	f	%	f	%	f	%		
Age	<20 yrs	19	42.2%	15	33.3%	4	8.9%	7	15.6%	45	$\chi 2$=1.30 p=0.97
	20 -25 yrs	41	44.6%	30	32.6%	11	12.0%	10	10.9%	92	
	26 -30 yrs	6	46.2%	4	30.8%	2	15.4%	1	7.7%	13	
Marital Status	Married	66	44.8%	47	32.6%	17	11.8%	17	11.8%	147	$\chi 2$=0.87 p=0.83
	Widow	0	0%	2	33.3%	0	0%	1	16.7%	3	
Locality of Residence	Rural	39	43.8%	27	30.3%	12	13.5%	11	12.4%	89	**$\chi 2$=19.1 p=0.004****
	Urban	6	23.1%	17	65.4%	1	3.8%	2	7.7%	26	
	Semi urban	21	60.0%	5	14.3%	4	11.4%	5	14.3%	35	
Education Status	No formal education	2	14.3%	10	71.4%	1	7.1%	1	7.1%	14	**$\chi 2$=55.3 p=0.001*****
	Primary	1	3.8%	21	80.8%	2	7.7%	2	7.7%	26	
	High school	38	56.7%	10	14.9%	9	13.4%	10	14.9%	67	
	Higher secondary	14	53.8%	4	15.4%	4	15.4%	4	15.4%	26	
	Collegiate Education	9	64.3%	3	21.5%	1	7.1%	1	7.1%	14	
	Professional Education	2	66.7%	1	33.3%	0	0.0%	0	0.0%	3	

Occupation	Home maker	63	49.6%	34	26.8%	15	11.8%	15	11.8%	127	
	Daily wage Laborer	1	10.0%	6	60.0%	2	20.0%	1	10.0%	10	
	Farmer	1	10.0%	8	80.0%	0	0%	1	10.0%	10	$\chi2$=12.2
	Technical Job	0	0%	0	0%	0	0%	1	100.0%	1	p=0.34
	Health Professional	0	0%	1	100.0%	0	0%	0	0%	1	
	Others	1	100.0%	0	0%	0	0%	0	0%	1	
Educational Status of Husband	No formal education	2	20.0%	7	70.0%	1	10.0%	0	0.0%	10	
	Primary	3	12.0%	17	68.0%	3	12.0%	2	8.0%	25	
	High school	39	46.4%	23	27.4%	12	14.3%	10	11.9%	84	
	Higher secondary	5	71.4%	1	14.3%	1	14.3%	0	0.0%	7	
	Collegiate Education	11	84.6%	0	0.0%	0	0.0%	2	15.4%	13	**$\chi2$=51.1**
	Professional Education	6	54.5%	1	9.1%	0	0.0%	4	36.4%	11	**p=0.001*** **
Occupation of Husband	Daily wage Laborer	40	51.9%	21	27.3%	7	9.1%	9	11.7%	77	
	Farmer	9	29.0%	16	51.6%	5	16.1%	1	3.2%	31	
	Technical Job	9	32.1%	11	39.3%	3	10.7%	5	17.9%	28	$\chi2$=21.2
	Health Professional	3	50.0%	0	0.0%	2	33.3%	1	16.7%	6	p=0.13
	Government Employee	4	57.1%	1	14.3%	0	0.0%	2	28.6%	7	
	Others	1	100.0%	0	0.0%	0	0.0%	0	0.0%	1	
Work pattern	Sedentary	7	43.8%	6	37.5%	1	6.3%	2	12.5%	16	$\chi2$=10.6
	Moderate	20	31.7%	23	36.5%	12	19.0%	8	12.7%	63	p=0.10
	Strenuous	39	54.9%	20	28.2%	4	5.6%	8	11.3%	71	
Type of family	Nuclear family	14	26.4%	23	43.4%	10	18.9%	6	11.3%	53	**$\chi2$=13.5**
	Joint family	50	53.2%	25	26.6%	7	7.4%	12	12.8%	94	**p=0.04***
	Extended family	2	66.7%	1	33.3%	0	0.0%	0	0.0%	3	

Income of family Rs per month	Rs.1001-3000	27	52.9%	11	21.6%	8	15.7%	5	9.8%	51	
	Rs.3001-5000	20	32.3%	29	46.8%	5	8.1%	8	12.9%	62	$\chi 2=14.5$ p=0.11
	Rs.5001-10000	18	51.4%	9	25.7%	4	11.4%	4	11.4%	35	
	>Rs.10000	1	50.0%	0	0%	0	0%	1	50.0%	2	
Support group during perinatal period	Parents	56	44.1%	43	33.9%	15	11.8%	13	10.2%	127	
	In-laws	8	42.1%	5	26.3%	2	10.5%	4	21.1%	19	$\chi 2=10.3$ p=0.32
	Husband	2	66.7%	1	33.3%	0	0%	0	0%	3	
	Relatives	0	0%	0	0%	0	0%	1	100.0%	1	

* Significant at P≤0.05, ** significant at P≤0.01*** significant at P≤0.001

Table 15 manifests the association between the postnatal blue scores of the postnatal mothers in the interventional group with selected socio - demographic variables. Chi square analysis revealed that there was a significant association between the level of postnatal blues and locality of residence ($\chi 2=19.1$ p=0.004**), educational status of the mother ($\chi 2=55.3$ p=0.001***), educational status of husband ($\chi 2=51.1$ p=0.001***), type of family ($\chi 2=13.5$ p=0.04*), i.e. postnatal mothers who hailed from semi urban background, more educated, with more educated husband, and those who hailed from joint family / extended family mothers were benefitted more.

Table 16: Association between postnatal blues scores and socio - demographic variables in the interventional group

N = 150

Socio - demographic variables		Mean postnatal blues score		One-way ANOVA F-test/t-test
		Mean	**SD**	
Age	<20 yrs	46.40	23.53	F=0.06 p=0.94
	20 -25 yrs	44.93	21.94	
	26 -30 yrs	44.92	21.18	
Marital Status	Married	45.43	22.17	t=0.15 p=0.87
	Widow	44.00	25.74	
Locality of Residence	Rural	49.90	21.29	**F=3.15 p=0.05***
	Urban	48.77	17.68	
	Semi urban	40.13	20.70	
Educational Status	No formal education	60.00	35.16	**F=2.31 p=0.05***
	Primary	56.36	27.10	
	High school	52.31	25.22	
	Higher secondary	42.42	23.15	
	Collegiate Education	40.92	14.88	
	Professional Education	36.79	16.53	
Occupation	Home maker	44.44	22.66	F=1.36 p=0.24
	Daily wage Laborer	52.10	18.08	
	Farmer	46.30	17.22	
	Technical Job	92.00	0.00	
	Health Professional	60.00	0.00	
	Govt employee	26.00	0.00	
Educational Status of Husband	No formal education	58.82	33.01	**F=2.36 p=0.05***
	Primary	50.15	24.79	
	High school	46.00	17.12	
	Higher secondary	44.00	17.12	
	Collegiate Education	40.15	24.79	
	Professional Education	34.70	12.48	
Occupation of Husband	Daily wage Laborer	43.04	22.24	F=0.71 p=0.62
	Farmer	45.71	17.63	
	Technical Job	50.96	23.74	
	Health Professional	49.33	27.67	
	Government Employee	46.57	31.34	
	Others	26.00	0.00	

Work pattern	Sedentary Moderate Strenuous	44.19 49.32 42.14	22.44 21.64 22.45	F=1.78 p=0.17
Type of family	Nuclear family Joint family Extended family	50.67 42.96 35.43	21.04 20.70 9.81	**F=4.03 p=0.02**
Income of family Rs /month	Rs.1001-3000 Rs.3001-5000 Rs.5001-10000 >Rs.10000	44.41 46.82 43.43 59.00	22.98 21.11 22.48 46.67	F=0.45 p=0.72
Support group during perinatal period	Parents In-laws Husband Relatives	44.33 51.95 32.00 63.00	21.12 27.32 10.39 0.00	F=0.56 p=0.70

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table no 16 shows the association between the blue scores of the postnatal mothers in the interventional group with selected socio-demographic variables using one-way analysis of variance F-test/t-test.

The analysis revealed that there was a significant association between the level of postnatal blues and locality of residence (F=3.15 p=0.05*), educational status of the mother (F = 2.31 p=0.05*), educational status of husband (F = 2.36 p=0.05*), type of family (F =4.03 p=0.02*).

Postnatal mothers who hailed from semi urban background, mothers who were more educated, with more educated husband, and those who hailed from joint family/ extended family mothers were benefitted more.

Figure 10 Association between level of postnatal blues and socio - demographic variables in the interventional group

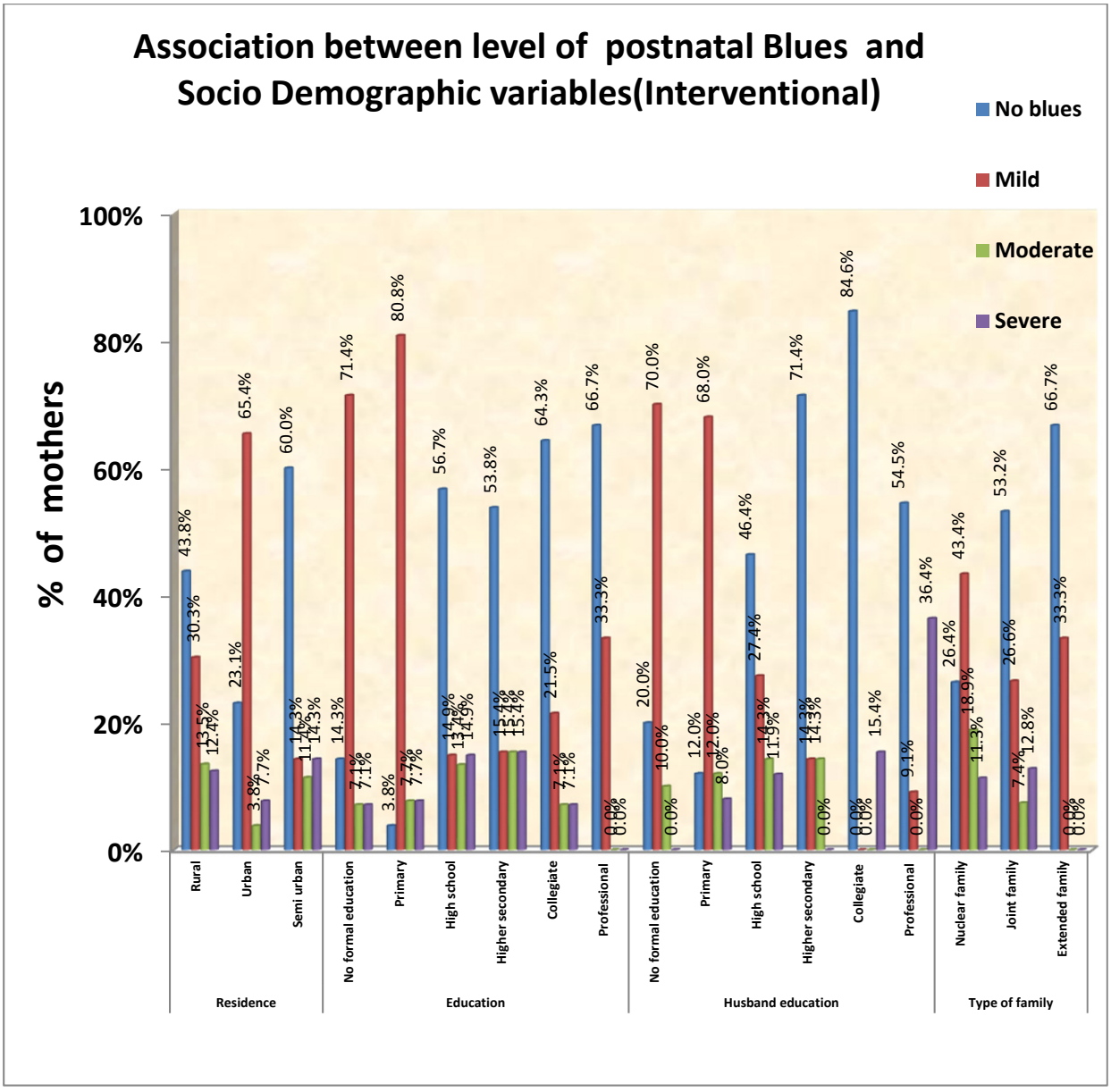


Fig 10 shows the association between level of postnatal blues and locality of residence, educational status of the mother, educational status of husband and type of family in the interventional group.

Table 17: Association between level of postnatal blues and obstetrical variables in the interventional group

N = 150

Obstetrical variables		Level of postnatal blues								Total	χ2
		No Blues		Mild Postnatal Blues		Moderate Postnatal Blues		Severe Postnatal Blues			
		f	%	f	%	f	%	f	%		
Whether registered in antenatal OPD	Yes	65	46.1%	47	33.3%	14	9.9%	15	10.6%	141	**χ2=10.39 p=0.01****
	No	1	11.1%	2	22.2%	3	3.3%	3	33.3%	9	
If yes number of checkups	0 -3 times	10	62.5%	1	6.3%	2	12.5%	3	18.8%	16	χ2=10.23 p=0.33
	4 -6 times	34	43.0%	26	32.9%	9	11.4%	10	12.7%	79	
	7 -9 times	17	41.5%	18	43.9%	4	9.8%	2	4.9%	41	
	10 -12 times	5	35.7%	4	28.6%	2	14.3%	3	21.4%	14	
Previous experience of seeing deliveries/ Post natal period	Yes	8	42.1%	6	31.6%	1	5.3%	4	21.1%	19	χ2=2.21 p=0.51
	No	58	44.3%	43	32.8%	16	12.2%	14	10.7%	131	
Stage I	< 10 hrs	26	54.2%	10	20.8%	4	8.3%	8	16.7%	48	**χ2=13.92 p=0.03***
	10 -12 hrs	32	48.5%	20	30.3%	8	12.1%	6	9.1%	66	
	>12 hrs	8	22.2%	19	52.8%	5	13.9%	4	11.1%	36	
Stage II	< 1 hr	30	41.7%	18	25.0%	13	18.1%	11	15.3%	72	**χ2=12.97 p=0.04***
	1 - 2 hrs	33	47.8%	25	36.2%	4	5.8%	7	10.1%	69	
	> 2 hrs	3	33.3%	6	66.7%	0	0.0%	0	0.0%	9	
Stage III	< 10 min	35	50.0%	16	22.9%	12	17.1%	7	10.0%	70	**χ2=26.66 p=0.01****
	10- 20 min	26	42.6%	27	44.3%	2	3.3%	6	9.8%	61	
	> 20 min	5	26.3%	6	31.7%	3	15.7%	5	26.3%	19	
Mode of Delivery	Normal with episiotomy	61	43.6%	46	32.9%	16	11.4%	17	12.1%	140	χ2=0.16 p=0.98
	Forceps	5	50.0%	3	30.0%	1	10.0%	1	10.0%	10	

Sex of the child	Male	41	46.1%	30	33.7%	11	12.4%	7	7.9%	89	$\chi2=3.60$
	Female	25	41.0%	19	31.1%	6	9.8%	11	18.0%	61	p=0.30
Birth weight of the Baby	< 1.5 kgs	7	63.6%	3	27.3%	1	9.1%	0	0%	11	
	1.5 - 2.0 kg	17	29.8%	25	43.9%	7	12.3%	8	14.0%	57	$\chi2=12.72$
	2.1 - 3.0 kg	39	49.4%	21	26.6%	9	11.4%	10	12.7%	79	p=0.18
	3.0 - 3.5 kg	3	100.0%	0	0%	0	0%	0	0%	3	
Congenital anomalies of the child if any	Yes	8	57.1%	1	7.1%	1	7.1%	4	28.6%	14	$\chi2=7.86$
	No	58	42.6%	48	35.3%	16	11.8%	14	10.3%	136	p=0.06
Health status of the child	Healthy	50	39.7%	46	36.5%	14	11.1%	16	12.7%	126	$\chi2=7.81$
	Sick	16	66.7%	3	12.5%	3	12.5%	2	8.3%	24	p=0.06
History of complications During pregnancy	Yes	1	20.0%	2	40.0%	1	20.0%	1	20.0%	5	$\chi2=1.38$
	No	65	44.8%	47	32.4%	16	11.0%	17	11.7%	145	p=0.71
Family History of any complication during pregnancy	Yes	1	33.3%	1	33.3%	1	33.3%	0	0%	3	$\chi2=1.75$
	No	65	44.2%	48	32.7%	16	10.9%	18	12.2%	147	p=0.62

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table 17 manifests the association between the postnatal blue scores of the postnatal mothers in the interventional group and obstetrical variables. Chi square analysis revealed that there was a significant association between the level of postnatal blues and Antenatal OPD registration ($\chi2=10.39$ p=0.01**), less duration of stage I, ($\chi2=13.92$ p=0.03*), stage II ($\chi2=12.97$ p=0.04*), and stage III ($\chi2=26.66$ p=0.01**) mothers were benefitted more. Statistical significance was calculated using chi square test.

Table 18 Association between Postnatal blues and obstetrical variables in the interventional group

N = 150

Obstetrical variables		Mean postnatal blues score		One-way ANOVA F-test/t-test
		Mean	SD	
Whether registered in antenatal OPD	Yes	28.89	8.30	**t=2.32 p=0.02***
	No	46.43	22.44	
If yes number of checkups	0 -3 times	44.13	26.88	F=1.78 p=0.17
	4 -6 times	45.44	22.65	
	7 -9 times	42.44	17.74	
	10 -12 times	55.00	25.59	
Previous experience of seeing deliveries/postnatal period	Yes	48.26	25.82	t=0.53 p=0.59
	No	44.95	21.74	
Stage I	< 10 hrs	40.35	24.81	**F=4.14 p=0.02***
	10 -12 hrs	46.27	20.87	
	>12 hrs	54.58	20.74	
Stage II	< 1 hr	36.15	24.09	**F=3.02 p=0.05***
	1 - 2 hrs	44.29	21.03	
	> 2 hrs	49.11	11.78	
Stage III	< 10 min	35.83	23.45	**F=2.70 p=0.03***
	10- 20 min	44.93	20.20	
	> 20 min	47.16	24.02	
Mode of Delivery	Normal with episiotomy	45.24	22.03	t=0.26p=0.78
	Forceps	47.20	26.14	
Sex of the child	Male	43.07	20.07	t=1.54 p=0.12
	Female	48.74	24.84	
Birth weight of the Baby	< 1.5 kgs	34.64	13.24	F=2.37 p=0.07
	1.5 - 2.0 kgs	49.51	22.37	
	2.1 - 3.0 kgs	44.62	22.77	
	3.0 - 3.5 kgs	26.00	.00	
Congenital abnormalities of the child	Yes	44.24	22.03	t=0.28 p=0.12
	No	46.20	25.14	
Health status of the child	Healthy	46.39	22.02	t=0.81 p=0.41
	Sick	40.04	23.05	
History of any complications During pregnancy	Yes	56.00	25.25	t=1.28p=0.20
	No	45.01	22.12	
Family History of any complication during pregnancy	Yes	44.33	18.50	t=1.08 p=0.27
	No	45.39	22.35	

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table 18 manifests the association between the postnatal blue scores of the postnatal mothers in the interventional group and obstetrical variables.

One-way analysis of variance F-test/t-test, revealed that there was a significant association between the level of postnatal blues and registration in the antenatal outpatient department (t = 2.32 p=0.02*), less duration of stage I, (F = 4.14. p=0.02*), stage II (F = 3.02 p=0.05*), and stage III (F = 2.70 p=0.03*) mothers were benefitted more. Statistical significance was calculated using one-way analysis of variance F-test/t-test.

Figure 11 Association between level of postnatal blues and obstetrical variables in the interventional group

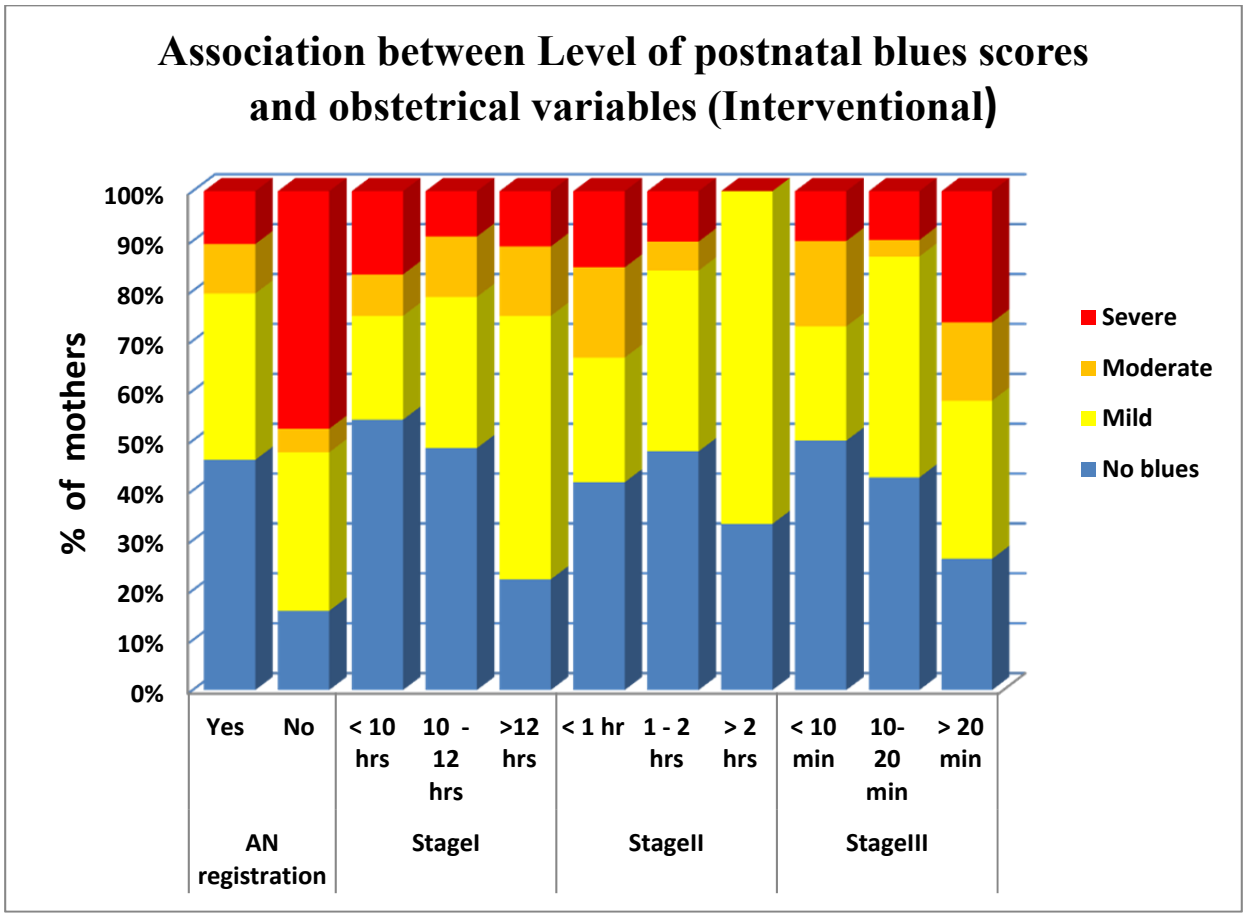


Fig 11 narrates the association between level of postnatal blues and obstetrical variables. In the interventional group there was a significant association between the level of postnatal blues and registration in Antenatal OPD, lesser duration of stage I, stage II and stage III of labour.

Table 19 Association between level of postnatal blues and socio - demographic variables in the control group.

N = 150

Socio - demographic variables		Level of postnatal blues								Total	$\chi 2$
		No Blues		Mild Postnatal Blues		Moderate Postnatal Blues		Severe Postnatal Blues			
		f	%	f	%	f	%	f	%		
Age	<20 yrs	2	4.2%	7	14.6%	26	54.2%	13	27.1%	48	**$\chi 2$=5.84 p=0.05***
	20 -25 yrs	14	15.9%	10	11.4%	37	42.0%	27	30.7%	88	
	26 -30 yrs	4	28.6%	4	28.6%	6	42.8%	0	0.0%	14	
Marital Status	Married	20	13.5%	20	13.5%	68	46.0%	40	27.0%	148	$\chi 2$=1.05 p=0.79
	Widow	0	0%	1	50.0%	1	50.0%	0	0%	2	
Locality of Residence	Rural	11	11.7%	14	14.9%	46	48.9%	23	24.5%	94	$\chi 2$=5.92 p=0.43
	Urban	6	24.0%	3	12.0%	7	28.0%	9	36.0%	25	
	Semi urban	3	9.7%	4	12.9%	16	51.6%	8	25.8%	31	
Educational Status	No formal education	1	9.1%	1	9.1%	6	54.5%	3	27.3%	11	$\chi 2$=15.65 p=0.40
	Primary	5	17.2%	4	13.8%	7	24.1%	13	44.8%	29	
	High school	9	12.9%	12	17.1%	34	48.6%	15	21.4%	70	
	Higher secondary	3	12.5%	2	8.3%	15	62.5%	4	16.7%	24	
	Collegiate Education	2	14.3%	1	7.1%	7	50.0%	4	28.6%	14	
	Professional Education	0	0%	1	50.0%	0	0%	1	50.0%	2	

Occupation	Home maker	18	14.1%	17	13.3%	58	45.3%	35	27.3%	128	
	Daily wage Laborer	2	20.0%	2	20.0%	3	30.0%	3	30.0%	10	
	Farmer	0	0%	2	25.0%	5	62.5%	1	12.5%	8	
	Technical Job	0	0%	0	0%	1	100.0%	0	0%	1	$\chi2=7.46$ p=0.94
	Health Professional	0	0%	0	0%	1	50.0%	1	50.0%	2	
	Govt employee	0	0%	0	0%	1	100.0%	0	0%	1	
Educational Status of Husband	No formal education	1	16.7%	0	0%	3	50.0%	2	33.3%	6	
	Primary	6	15.8%	6	15.8%	12	31.6%	14	36.8%	38	
	High school	9	12.0%	10	13.3%	36	48.0%	20	26.7%	75	
	Higher secondary	0	0%	0	0%	6	85.7%	1	14.3%	7	$\chi2=20.7$ p=0.14
	Collegiate Education	0	0%	3	23.1%	9	69.2%	1	7.7%	13	
	Professional Education	4	36.4%	2	18.2%	3	27.3%	2	18.2%	11	
Occupation of Husband	Daily wage Laborer	10	13.3%	11	14.7%	37	49.3%	17	22.7%	75	
	Farmer	3	10.0%	4	13.3%	10	33.3%	13	43.3%	30	
	Technical Job	6	18.8%	6	18.8%	13	40.6%	7	21.9%	32	
	Health Professional	0	0%	0	0%	5	83.3%	1	16.7%	6	$\chi2=12.6$ p=0.63
	Government Employee	1	16.7%	0	0%	3	50.0%	2	33.3%	6	
	Others	0	0%	0	0%	1	100.0%	0	0%	1	
Work pattern	Sedentary	2	11.8%	2	11.8%	9	52.9%	4	23.5%	17	
	Moderate	8	11.6%	12	17.4%	23	33.3%	26	37.7%	69	**$\chi2=12.34$ p=0.05***
	Strenuous	10	15.6%	7	10.9%	37	57.8%	10	15.7%	64	
Type of family	Nuclear family	11	21.6%	9	17.6%	16	31.4%	15	29.4%	51	
	Joint family	9	9.3%	12	12.4%	51	52.6%	25	25.8%	97	$\chi2=10.26$ p=0.11
	Extended family	0	0%	0	0%	2	100.0%	0	0%	2	

Income of family Rs per month	Rs.1001-3000	8	15.7%	5	9.8%	23	45.1%	15	29.4%	51	$\chi 2=4$ .86 p=0.66
	Rs.3001-5000	9	13.6%	10	15.2%	29	43.9%	18	27.3%	66	
	Rs.5001-10000	3	9.7%	6	19.4%	15	48.4%	7	22.6%	31	
	>Rs.10000	0	0%	0	0%	2	100%	0	0%	2	
Support group during perinatal period	Parents	17	13.1%	16	12.3%	58	44.6%	39	30.0%	130	$\chi 2=8.97$ p=0.44
	In-laws	3	17.6%	4	23.5%	9	52.9%	1	5.9%	17	
	Husband	0	0%	1	50.0%	1	50.0%	0	0%	2	
	Relatives	0	0%	0	0%	1	100.0%	0	0%	1	

* Significant at P≤0.05

Table 19 shows the association between the blue scores of the postnatal mothers in the control group with selected socio - demographic variables. Chi – Square analysis was done to rule out the association between the level of postnatal blues and the socio - demographic variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

There was a significant association between the level of postnatal blues and age ($\chi 2=5.84 p=0.05$*), work pattern ($\chi 2=12.34$ p=0.05*). The elder mothers and the mothers who were strenuous workers were benefitted more.

There was no significant association between the level of postnatal blues and the other socio - demographic variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

Table 20 Association between postnatal blues score and socio - demographic variables in the control group

N = 150

Socio -demographic variables		Mean postnatal blues score		One-way ANOVA F-test/t-test
		Mean	SD	
Age	<20 yrs	65.77	21.14	F=1.63 p=0.19
	20 -25 yrs	72.92	22.93	
	26 -30 yrs	69.79	19.26	
Marital Status	Married	70.28	22.15	t=0.14 p=0.88
	Widow	71.67	24.41	
Locality of Residence	Rural	70.65	21.16	F=0.39 p=0.67
	Urban	66.96	27.00	
	Semi urban	72.13	21.28	
Educational Status	No formal education	56.09	20.35	**F=2.27p=0.05***
	Primary	60.29	25.53	
	High school	68.93	22.06	
	Higher secondary	74.14	20.06	
	Collegiate Education	76.70	21.93	
	Professional Education	80.09	20.35	
Occupation	Home maker	69.95	22.55	F=0.50 p=0.77
	Daily wage Laborer	67.90	24.89	
	Farmer	73.25	15.64	
	Technical Job	66.00	0.00	
	Health Professional	92.00	2.83	
	Government Employee	83.00	0.00	
Educational Status of Husband	No formal education	77.33	25.04	F=1.10 p=0.36
	Primary	71.45	24.02	
	High school	71.03	21.66	
	Higher secondary	77.43	13.91	
	Collegiate Education	67.00	16.07	
	Professional Education	57.45	26.42	
Occupation of Husband	Daily wage Laborer	68.85	22.03	F=0.58 p=0.71
	Farmer	75.17	22.53	
	Technical Job	68.34	23.82	
	Health Professional	75.67	12.11	
	Government Employee	67.50	23.33	
	Others	86.00	0.00	
Work pattern	Sedentary	67.01	23.42	**F=3.41 p=0.04***
	Moderate	71.29	21.22	
	Strenuous	73.67	20.84	

Type of family	Nuclear family Joint family Extended family	66.69 71.95 85.50	25.04 20.51 3.54	F=1.42p=0.24
Income of family Rs/ month	Rs.1001-3000 Rs.3001-5000 Rs.5001-10000 >Rs.10000	71.90 69.30 69.77 73.50	23.57 22.37 20.23 17.68	F=0.15 p=0.92
Support group during perinatal period	Parents In-laws Husband Relatives	71.52 63.06 60.50 61.00	22.33 21.53 2.12 0.00	F=0.92 p=0.43

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table 20 shows the association between the blue scores of the postnatal mothers in the control group with selected socio - demographic variables. One-way analysis of variance F-test/t-test, analysis was done to rule out the association between the level of postnatal blues and the socio - demographic variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

There was a significant association between the postnatal blue scores and educational status of the mother (F= 2.27, p = 0.05*), work pattern of the mothers (F= 3.41, p= 0.04*). Statistical significance was calculated using one-way analysis of variance F-test/t-test.

Figure 12 Association between level of postnatal blues and socio - demographic variables in the control group

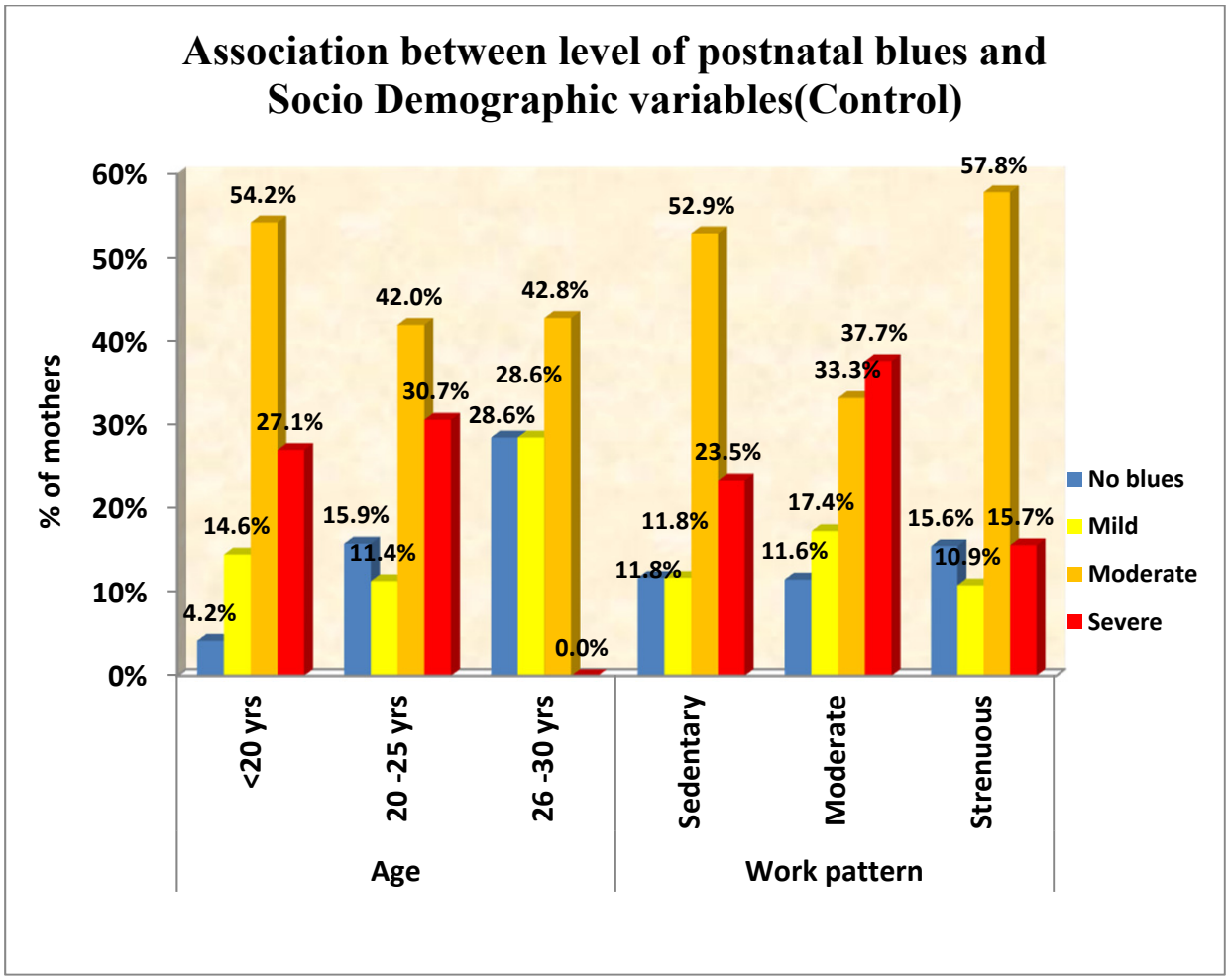


Fig 12 states the association between level of postnatal blues and socio - demographic variables. There was a significant association between the level of postnatal blues and age, work pattern in the control group.

Table 21 Association between level of postnatal blues and obstetrical variables in the control group.

N = 150

Obstetrical Variables		Level of postnatal blues								Total	$\chi 2$
		No Blues		Mild Postnatal Blues		Moderate Postnatal Blues		Severe Postnatal Blues			
		f	%	f	%	f	%	f	%		
Whether registered in antenatal OPD	Yes	20	14.0%	20	14.0%	64	44.8%	39	27.3%	143	$\chi 2$=2.43
	No	0	0%	1	14.3%	5	71.4%	1	14.3%	7	p=0.48
If yes number of checkups	0 -3 times	2	14.3%	2	14.3%	9	64.3%	1	7.1%	14	
	4 -6 times	13	19.7%	7	10.6%	31	47.0%	15	22.7%	66	$\chi 2$=13.00
	7 -9 times	4	7.8%	10	19.6%	22	43.1%	15	29.4%	51	p=0.16
	10 -12 times	1	5.3%	2	10.5%	7	36.8%	9	47.4%	19	
Previous experience of seeing deliveries	Yes	3	18.8%	3	18.8%	7	43.8%	3	18.8%	16	$\chi 2$=1.12
	No	17	12.7%	18	13.4%	62	46.3%	37	27.6%	134	p=0.17
Stage I	< 10 hrs	7	14.9%	5	10.6%	22	46.8%	13	27.7%	47	$\chi 2$=7.16
	10 -12 hrs	4	6.3%	10	15.9%	33	52.4%	16	25.4%	63	p=0.31
	>12 hrs	9	22.5%	6	15.0%	14	35.0%	11	27.5%	40	
Stage II	< 1 hr	11	15.1%	11	15.1%	34	46.6%	17	23.3%	73	$\chi 2$=2.22
	1 - 2 hrs	8	11.8%	9	13.2%	32	47.1%	19	27.9%	68	p=0.87
	> 2 hrs	1	11.1%	1	11.1%	3	33.3%	4	44.4%	9	
Stage III	< 10 min	12	16.2%	14	18.9%	29	39.2%	19	25.7%	74	$\chi 2$=6.26
	10- 20 min	6	10.5%	6	10.5%	28	49.1%	17	29.8%	57	p=0.39
	> 20 min	2	10.5%	1	5.3%	12	63.2%	4	21.1%	19	

Mode of Delivery	Normal with episiotomy	18	12.8%	20	14.2%	64	45.4%	39	27.7%	141	χ^2=1.68
	Forceps	2	22.2%	1	11.1%	5	55.6%	1	11.1%	9	p=0.64
Sex of the child	Male	9	10.3%	17	19.5%	39	44.8%	22	25.3%	87	χ^2=6.13
	Female	11	17.5%	4	6.3%	30	47.6%	18	28.6%	63	p=0.10
Birth weight of the Baby	< 1.5 kgs	2	20.0%	3	30.0%	3	30.0%	2	20.0%	10	χ^2=8.61
	1.5 - 2.0 kgs	9	15.0%	9	15.0%	22	36.7%	20	33.3%	60	p=0.47
	2.1 - 3.0 kgs	9	11.7%	9	11.7%	42	54.5%	17	22.1%	77	
	3.0 - 3.5 kgs	0	0%	0	0%	2	66.7%	1	33.3%	3	
Congenital abnormalities of the child.	Yes	1	7.7%	7	53.8%	3	23.1%	2	15.4%	13	**χ^2=18.78**
	No	19	13.8%	14	10.2%	66	48.2%	38	27.7%	137	**p=0.01****
Health status of the child	Healthy	19	11.8%	14	14.2%	62	47.2%	32	26.8%	127	**χ^2=8.98**
	Sick	1	21.7%	7	13.0%	7	39.1%	8	26.1%	23	**p=0.03***
History of any complications During pregnancy	Yes	2	33.3%	1	16.7%	1	16.7%	2	33.3%	6	χ^2=3.18
	No	18	12.5%	20	13.9%	68	47.2%	38	26.4%	144	p=0.36
Family History of complication during pregnancy	Yes	0	0%	0	0%	2	66.7%	1	33.3%	3	χ^2=1.17
	No	20	13.6%	21	14.3%	67	45.6%	39	26.5%	147	p=0.76

* Significant at P≤0.05, ** significant at P≤0.01

Table 21 shows the association between the postnatal blue scores of the postnatal mothers in the control group with selected obstetrical variables.

Chi – Square analysis was done to rule out the association between the level of postnatal blues and the obstetrical variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

There was a significant association between the level of postnatal blues and presence congenital abnormalities of the child ($\chi 2=18.78$ p=0.01**), health status of the child ($\chi 2=8.98$ p=0.03*). The mothers who had child without congenital abnormalities and those who had a healthy child were benefitted more.

There was no significant association between the level of postnatal blues and the other obstetrical variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

Table 22 Association between postnatal blues and obstetrical variables in the control group

Obstetrical variables		Mean postnatal blues score		One-way ANOVA F-test/t-test
		Mean	SD	
Whether registered in antenatal OPD	Yes No	70.52 66.57	22.51 13.40	t=0.46 p=0.64
If yes number of checkups	0 -3 times 4 -6 times 7 -9 times 10 -12 times	66.29 65.81 73.72 81.37	19.27 23.23 22.32 18.82	F=0.21 p=0.64
Previous experience of seeing deliveries/postnatal period	Yes No	64.50 71.04	22.07 22.14	t=1.11 p=0.26
Stage I	< 10 hrs 10 -12 hrs >12 hrs	70.47 71.52 68.33	22.25 20.46 24.89	F=0.25 p=0.77
Stage II	< 1 hr 1 - 2 hrs > 2 hrs	68.19 71.69 77.56	22.39 21.78 23.24	F=0.94 p=0.37
Stage III	< 10 min 10- 20 min > 20 min	67.16 73.51 73.21	23.14 21.31 19.92	F=1.51 p=0.23
Mode of Delivery	Normal with episiotomy Forceps	70.60 66.22	21.87 27.35	t=0.57p=0.56
Sex of the child	Male Female	70.61 69.97	21.25 23.51	t=0.17 p=0.86
Birth weight of the Baby	< 1.5 kgs 1.5 - 2.0 kgs 2.1 - 3.0 kgs 3.0 - 3.5 kgs	63.10 72.52 68.92 87.33	26.31 24.15 20.08 4.16	F=1.24 p=0.29
Congenital abnormalities of the child	Yes No	60.31 73.29	22.79 21.94	**t=1.96 p=0.05***
Health status of the child	Healthy Sick	72.01 60.65	21.53 25.57	**t=2.25 p=0.03***
History of any complications During pregnancy	Yes No	65.17 70.56	31.01 21.83	t=0.58p=0.56
Family History of any complication during pregnancy	Yes No	90.67 69.93	6.43 22.17	t=1.61 p=0.10

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table no 22 shows the association between the blue scores of the postnatal mothers in the control group with selected obstetrical variables.

One-way analysis of variance F-test/t-test was done to rule out the association between the level of postnatal blues and the obstetrical variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

There was a significant association between the level of postnatal blues and presence congenital abnormalities of the child (F= 1.96 p=0.05*), health status of the child (t = 2.25 p=0.03*). Statistical significance was calculated using one-way analysis of variance F-test/t-test.

Figure 13 Association between level of postnatal blues and obstetrical variables in the control group

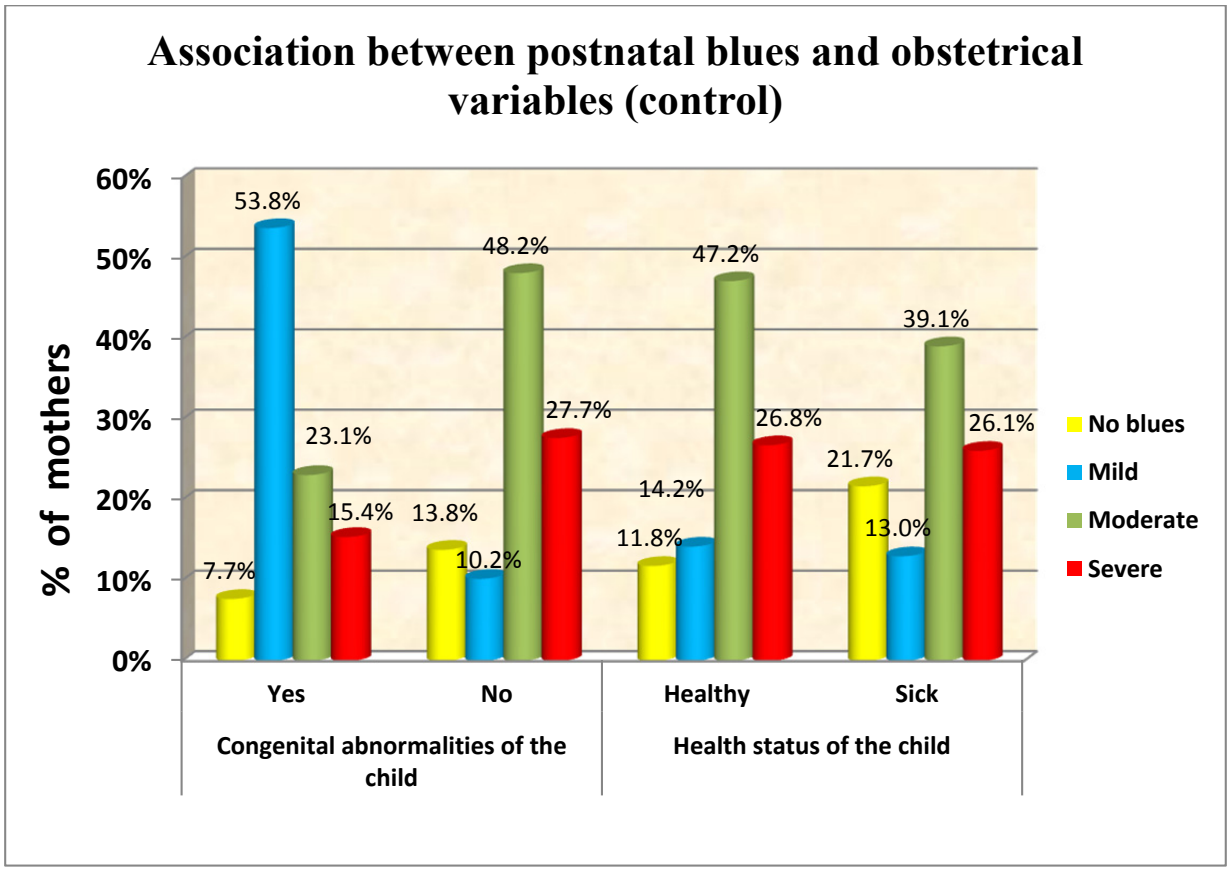


Fig 13 identifies the association between level of postnatal blues and obstetrical variables. There was a significant association between the level of postnatal blues and presence congenital abnormalities of the child, health status of the child in the control group.

Table 23 Association between level of maternal self - esteem and socio - demographic variables in the interventional group

N = 150

Socio - demographic variables		Level of maternal self - esteem						Total	χ2
		Low		Moderate		Good			
		f	%	f	%	f	%		
Age	<20 yrs	14	31.1%	10	22.2%	21	46.7%	45	**χ2=9.74 p=0.04***
	20 -25 yrs	11	11.9%	22	23.9%	59	64.1%	92	
	26 -30 yrs	1	7.7%	2	15.4%	10	76.9%	13	
Marital Status	Married	26	17.7%	33	22.4%	88	59.9%	147	χ2=0.14 p=0.92
	widow	0	0%	1	33.3%	2	66.7%	3	
Locality of Residence	Rural	13	14.6%	21	23.6%	55	61.8%	89	χ2=6.20 p=0.18
	Urban	3	11.5%	4	15.4%	19	73.1%	26	
	Semi urban	10	28.6%	9	25.7%	16	45.7%	35	
Educational Status	No formal education	2	14.3%	2	14.3%	10	71.4%	14	**χ2=28.49 p=0.001*** **
	Primary	6	23.1%	4	15.3%	16	61.5%	26	
	High school	10	14.9%	21	31.3%	36	53.7%	67	
	Higher secondary	5	19.2%	6	23.1%	15	57.6%	26	
	Collegiate Education	2	14.2%	3	21.4%	9	64.2%	14	
	Professional Education	1	33.3%	0	0.0%	2	66.6%	3	
Occupation	Home maker	24	18.9%	29	22.8%	74	58.3%	127	χ2=7.22 p=0.70
	Daily wage Laborer	1	10.0%	3	30.0%	6	60.0%	10	
	Farmer	1	10.0%	1	10.0%	8	80.0%	10	
	Technical Job	0	0%	1	100.0%	0	0%	1	
	Health Professional	0	0%	0	0%	1	100.0%	1	
	Govt employee	0	0%	0	0%	1	100.0%	1	

Educational Status of Husband	No formal education	0	0%	2	20.0%	8	80.0%	10	
	Primary	3	12.0%	1	4.0%	21	84.0%	25	
	High school	15	17.9%	21	25.0%	48	57.1%	84	
	Higher secondary	2	28.6%	2	28.6%	3	42.9%	7	$\chi2=14.17$ p=0.16
	Collegiate Education	3	23.1%	5	38.5%	5	38.5%	13	
	Professional Education	3	27.3%	3	27.3%	5	45.5%	11	
Occupation of Husband	Daily wage Laborer	16	20.8%	15	19.5%	46	59.7%	77	
	Farmer	2	6.5%	7	22.6%	22	71.0%	31	
	Technical Job	5	17.9%	7	25.0%	16	57.1%	28	$\chi2=14.45$ p=0.15
	Health Professional	0	0%	4	66.7%	2	33.3%	6	
	Government Employee	3	42.9%	1	14.3%	3	42.9%	7	
	Others	0	0%	0	0%	1	100.0%	1	
Work pattern	Sedentary	5	31.3%	2	12.5%	9	56.3%	16	$\chi2=5.99$ p=0.19
	Moderate	6	9.5%	16	25.4%	41	65.1%	63	
	Strenuous	15	21.1%	16	22.5%	40	56.3%	71	
Type of family	Nuclear family	4	7.5%	9	17.0%	40	75.5%	53	**$\chi2=12.0$ p=0.02***
	Joint family	22	23.4%	25	26.6%	47	50.0%	94	
	Extended family	0	0.0%	0	0.0%	3	100.0%	3	
Income of family Rs per month	Rs.1001-3000	16	31.3%	14	27.4%	21	41.3%	51	
	Rs.3001-5000	8	12.9%	14	22.6%	40	64.5%	62	**$\chi2=16.48$ p=0.01****
	Rs.5001-10000	2	5.7%	6	17.1%	27	77.2%	35	
	>Rs.10000	0	0.0%	0	0.0%	2	100.0%	2	
Support group during perinatal period	Parents	21	16.5%	27	21.3%	79	62.2%	127	$\chi2=8.90$ p=0.17
	In-laws	4	21.1%	5	26.3%	10	52.6%	19	
	Husband	0	0%	2	66.7%	1	33.3%	3	
	Relatives	1	100.0%	0	0%	0	0%	1	

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table 23 shows the association between the level of self - esteem of the postnatal mothers in the interventional group and selected socio-demographic variables. Chi square analysis revealed that there was a significant association between the level of maternal self - esteem and age ($\chi2=9.74$ p=0.04*), type of family($\chi2=12.0$ p=0.02*), educational status of the mother, ($\chi2=28.49$ p=0.001***), income of the family Rs / month ($\chi2=16.48$ p=0.01**),

i.e. the postnatal mothers who were elders, with more educational qualification, earning more monthly income and those hailing from a joint family/extended mothers were benefitted more.

There was no significant association between the level of self - esteem and socio - demographic variables in the interventional group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

Table 24 Association between maternal self -esteem score and socio - demographic variables in the interventional group

Socio - demographic variables		Mean self-esteem score		One-way ANOVA F-test/t-test
		Mean	SD	
Age	<20 yrs	76.27	16.75	F=0.10 p=0.91
	20 -25 yrs	72.67	18.69	
	26 -30 yrs	65.00	17.96	
Marital Status	Married	76.32	16.67	t=0.04 p=0.96
	Widow	79.78	13.93	
Locality of Residence	Rural	70.79	19.12	**F=3.14 p=0.04***
	Urban	74.32	18.39	
	Semi urban	79.31	16.65	
Educational Status	No formal education	61.65	19.50	**F=2.29 p=0.05***
	Primary	64.94	16.88	
	High school	72.81	11.24	
	Higher secondary	74.29	17.57	
	Collegiate Education	76.80	16.89	
	Professional Education	78.11	5.42	
Occupation	Home maker	75.43	17.23	F=0.45 p=0.81
	Daily wage Laborer	78.18	15.05	
	Farmer	71.53	20.29	
	Technical Job	75.49	17.17	
	Health Professional	83.90	7.91	
	Government Employee	76.20	16.89	
Educational Status of Husband	No formal education	75.84	16.87	F=1.07 p=0.37
	Primary	76.55	12.81	
	High school	80.32	13.60	
	Higher secondary	73.20	18.76	
	Collegiate Education	68.33	20.74	
	Professional Education	78.21	13.26	
Occupation of Husband	Daily wage Laborer	75.83	17.18	F=1.54 p=0.37
	Farmer	76.34	16.90	
	Technical Job	74.54	16.70	
	Health Professional	78.00	19.85	
	Government Employee	75.99	16.79	
	Others	87.33	7.64	
Work pattern	Sedentary	65.00	17.96	**F=6.54 p=0.02***
	Moderate	76.32	16.67	
	Strenuous	79.78	13.93	

Type of family	Nuclear family Joint family Extended family	75.82 76.27 72.67	16.90 16.75 18.69	F=1.72 p=0.19
Income of family Rs/ month	Rs.1001-3000 Rs.3001-5000 Rs.5001-10000 >Rs.10000	78.79 74.32 76.31 72.65	19.12 18.39 16.65 19.50	F=1.79p=0.15
Support group during perinatal period	Parents In-laws Husband Relatives	75.94 80.81 75.29 75.80	16.88 11.24 17.57 16.89	F=1.84 p=0.15

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table no 24 shows the association between the maternal self – esteem scores of the postnatal mothers in the interventional group with selected socio - demographic variables.

One-way analysis of variance F-test/t-test was done to rule out the association between the level of postnatal blues and the obstetrical variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

There was a significant association between the level of maternal self esteem and locality of residence (F= 3.14 p=0.04*), educational status of the mother (F = 2.29 p=0.05*), and work pattern of the mother (F= 6.54 p= 0.02*).

Mothers who hailed from semi urban locality, mothers who were more educated, and mothers who did strenuous type of work were benefitted more. Statistical significance was calculated using one-way analysis of variance F-test/t-test.

Figure 14 Association between level of maternal self - esteem and socio - demographic variables in the interventional group

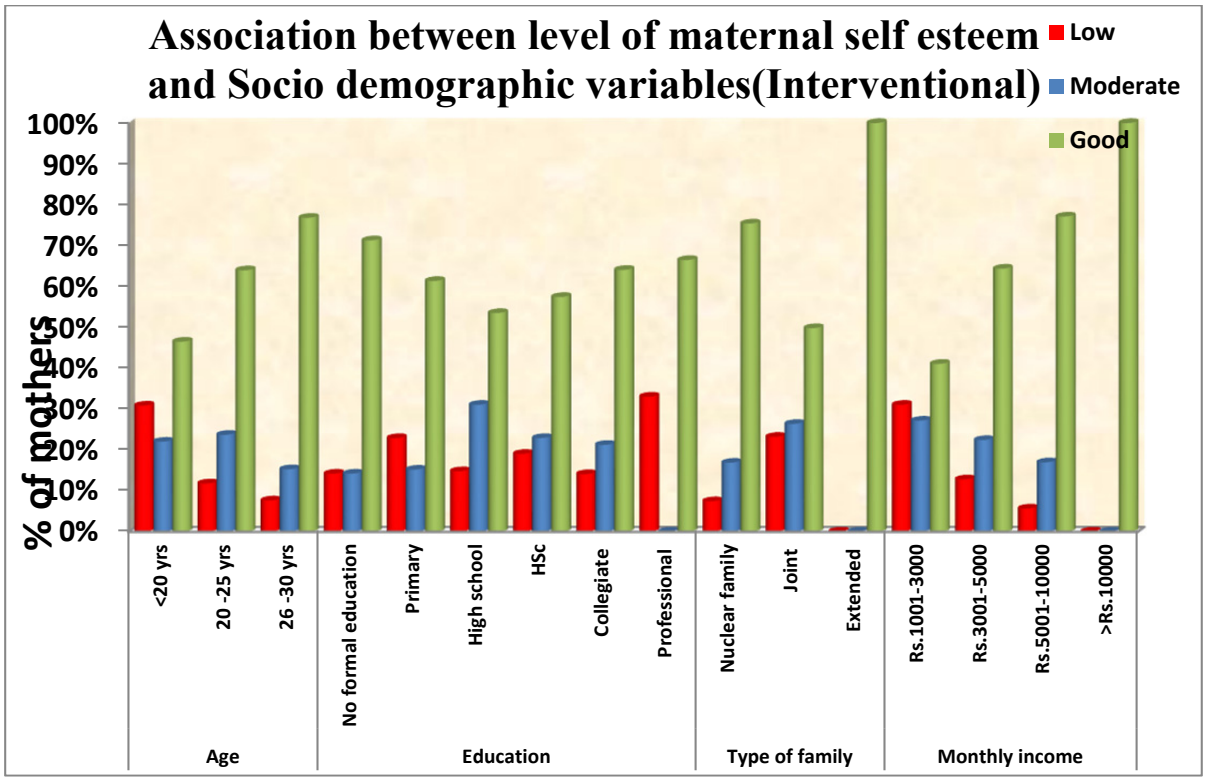


Fig 14 depicts the association between level of maternal self - esteem and socio - demographic variables. There was a significant association between the level of maternal self - esteem and age, type of family, educational status of the mother, and income of the family Rs / month in the interventional group.

Table 25 Association between level of maternal self - esteem and obstetrical variables in the interventional Group

N = 150

Obstetrical Variables		Level of maternal self - esteem						Total	$\chi 2$
		Low		Moderate		Good			
		f	%	f	%	f	%		
Whether registered in antenatal OPD	Yes	24	17.0%	31	22.0%	86	61.0%	141	$\chi 2$=0.99
	No	2	22.2%	3	33.3%	4	44.4%	9	p=0.60
If yes number of checkups	0 -3 times	5	31.3%	7	43.8%	4	25.0%	16	$\chi 2$=10.01 p=0.12
	4 -6 times	13	16.5%	16	20.3%	50	63.3%	79	
	7 -9 times	5	12.2%	8	19.5%	28	68.3%	41	
	10 -12 times	3	21.4%	3	21.4%	8	57.1%	14	
Previous experience of seeing deliveries/ postnatal period	Yes	5	26.3%	1	5.3%	13	68.4%	19	$\chi 2$=4.17 p=0.12
	No	21	16.0%	33	25.2%	77	58.8%	131	
Stage I	< 10 hrs	13	27.1%	11	22.9%	24	50.0%	48	$\chi 2$=7.23 p=0.13
	10 -12 hrs	11	16.7%	15	22.7%	40	60.6%	66	
	>12 hrs	2	5.6%	8	22.2%	26	72.2%	36	
Stage II	< 1 hr	13	18.1%	17	23.6%	42	58.3%	72	$\chi 2$=2.23 p=0.69
	1 - 2 hrs	13	18.8%	15	21.7%	41	59.4%	69	
	> 2 hrs	0	0%	2	22.2%	7	77.8%	9	
Stage III	< 10 min	12	17.1%	21	30.0%	37	52.9%	70	**$\chi 2$=40.67 p=0.001*** **
	10- 20 min	8	13.1%	8	13.1%	45	73.8%	61	
	> 20 min	6	31.6%	5	26.3%	8	42.1%	19	
Mode of Delivery	Normal with episiotomy	26	18.6%	31	22.1%	83	59.3%	140	$\chi 2$=2.29 p=031
	Forceps	0	0%	3	30.0%	7	70.0%	10	
Sex of the child	Male	16	18.0%	17	19.1%	56	62.9%	89	$\chi 2$=1.59
	Female	10	16.4%	17	27.9%	34	55.7%	61	p=0.45

Birth weight of the Baby	< 1.5 kgs	1	9.1%	6	54.5%	4	36.4%	11	
	1.5 - 2.0 kgs	5	8.8%	12	21.1%	40	70.2%	57	$\chi 2=7.61$
	2.1 - 3.0 kgs	19	24.1%	14	17.7%	46	58.2%	79	p=0.31
	3.0 - 3.5 kgs	1	33.3%	2	66.7%	0	0%	3	
Congenital anomalies of the child	Yes	1	7.1%	6	42.9%	7	50.0%	14	**$\chi 2=12.27$**
	No	25	18.4%	28	20.6%	83	61.0%	136	**p=0.01***
Health status of the child	Healthy	21	16.7%	23	18.3%	82	65.1%	126	**$\chi 2=18.94$ p=0.001***
	Sick	5	20.8%	11	45.8%	8	33.3%	24	
History of complications During pregnancy	Yes	1	20.0%	1	20.0%	3	60.0%	5	$\chi 2=0.04$ p=0.96
	No	25	17.2%	33	22.8%	87	60.0%	145	
Family History of any complication during pregnancy	Yes	0	0%	0	0%	3	100.0%	3	$\chi 2=2.04$ p=0.36
	No	26	17.7%	34	23.1%	87	59.2%	147	

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table 25 shows the association between the level of self - esteem of the postnatal mothers in the interventional group and selected obstetrical variables. Chi square analysis revealed that there was a significant association between the level of self - esteem of the postnatal mothers in the interventional group and stage III labour ($\chi 2=40.67$ p=0.001***), absence of congenital abnormalities of the child ($\chi 2=12.27$ p=0.01*), health status of the child ($\chi 2=18.94$ p=0.001*), of the obstetrical variables, i.e. the postnatal mothers who had lesser duration of stage III labour, mother who had a child without congenital abnormalities and mothers who had healthy child were benefitted more.

There was no significant association between the level of self - esteem and other obstetrical variables among postnatal mothers admitted at Government Rajaji Hospital, Madurai in the interventional group.

Table 26 Association between self-esteem and obstetrical variables in the interventional group

Obstetrical variables		Mean postnatal blues score		One-way ANOVA F-test/t-test
		Mean	SD	
Whether registered in antenatal OPD	Yes No	83.27 70.67	16.75 18.69	**t=1.99 p=0.05***
If yes number of checkups	0 -3 times 4 -6 times 7 -9 times 10 -12 times	705.00 76.32 79.78 78.79	17.96 16.67 13.93 19.12	F=2.03 p=0.10
Previous experience of seeing deliveries/postnatal period	Yes No	74.32 76.31	18.39 16.65	t=0.48 p=0.63
Stage I	< 10 hrs 10 -12 hrs >12 hrs	80.65 75.94 70.81	19.50 16.88 11.24	**F=2.76 p=0.05***
Stage II	< 1 hr 1 - 2 hrs > 2 hrs	80.29 75.80 72.11	17.57 16.89 5.42	**F=4.18 p=0.02***
Stage III	< 10 min 10- 20 min > 20 min	79.43 78.18 71.53	17.23 15.05 20.29	**F=4.22 p=0.02***
Mode of Delivery	Normal with episiotomy Forceps	75.49 83.90	17.17 7.91	t=1.53p=0.12
Sex of the child	Male Female	76.20 75.84	16.89 16.87	t=0.13 p=0.89
Birth weight of the Baby	< 1.5 kgs 1.5 - 2.0 kgs 2.1 - 3.0 kgs 3.0 - 3.5 kgs	76.55 80.32 73.20 68.33	12.81 13.60 18.76 20.74	F=2.24 p=0.09
Congenital abnormalities of the child	Yes No	78.21 75.83	13.26 17.18	t=0.50 p=0.61
Health status of the child	Healthy Sick	76.34 74.54	16.90 16.70	t=0.47 p=0.63
History of any complications During pregnancy	Yes No	78.00 75.99	19.85 16.79	t=1.28p=0.20
Family History of any complication during pregnancy	Yes No	87.33 75.82	7.64 16.90	t=1.08 p=0.27

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table no 26 shows the association between the self – esteem scores of the postnatal mothers in the interventional group with selected obstetrical variables.

One-way analysis of variance F-test/t-test was done to rule out the association between the level of self esteem and the obstetrical variables in the interventional group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

There was a significant association between the level of maternal self esteem and registration in antenatal outpatient department ($t = 1.99$ $p = 0.05^*$), duration of labour in stage I ($F= 2.76$ $p=0.05^*$), duration of labour in stage II ($F = 4.18$ $p=0.02^*$), and duration of labour in stage III ($F= 4.22$ $p= 0.02^*$).

Postnatal mothers who had registered themselves in the antenatal outpatient department and who had 7-9 visits, mothers who had less duration of stage I, stage II and stage III mothers were benefitted more. Statistical significance was calculated using one-way analysis of variance F-test/t-test.

Figure 15 Association between level of maternal self - esteem and obstetrical variables in the interventional group

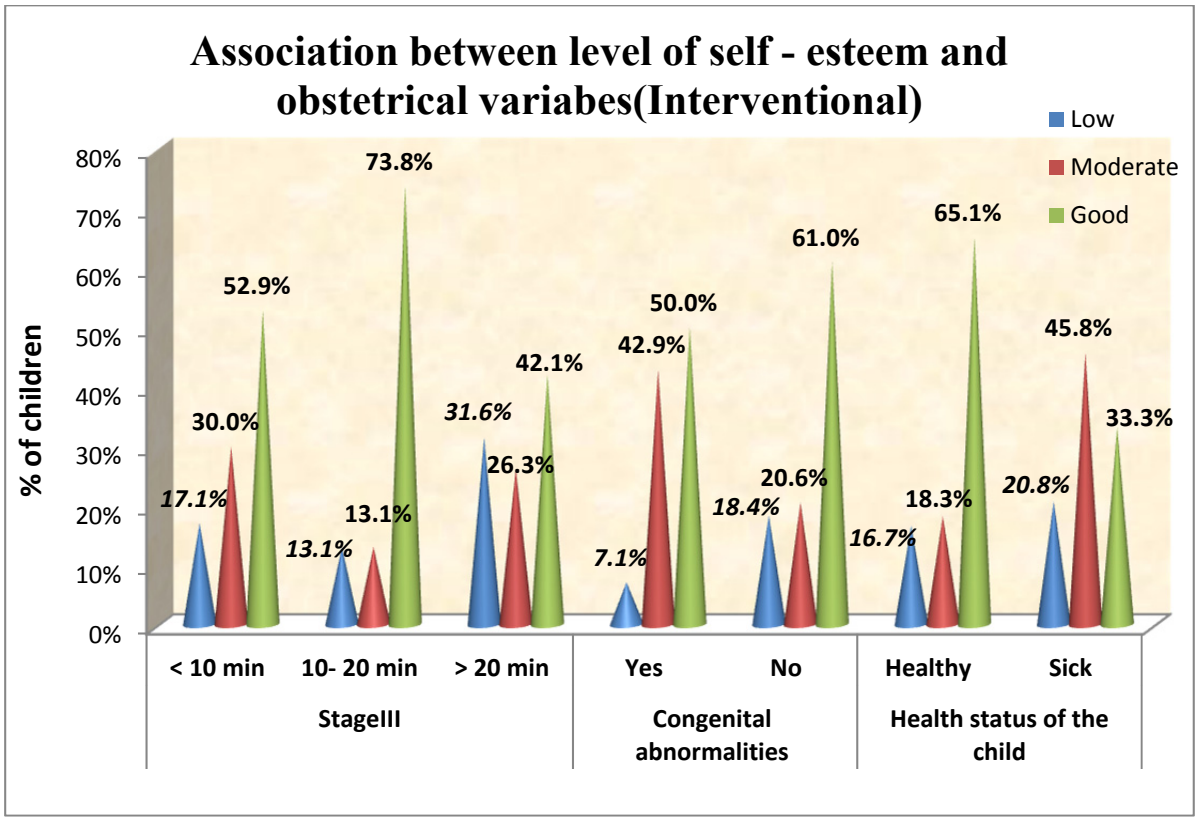


Fig 15 portrays the association between level of maternal self - esteem and obstetrical variables. There was a significant association between the level of self - esteem of the postnatal mothers in the interventional group and stage III labour, absence of congenital abnormalities of the child and health status of the child in the interventional group.

Table 27 Association between level of maternal self - esteem and socio - demographic variables in the Control group

N = 150

Socio - demographic Variables		Level of maternal self - esteem						Total	χ^2
		Low		Moderate		Good			
		f	%	f	%	f	%		
Age	<20 yrs	23	47.9%	18	37.5%	7	14.6%	48	χ^2=1.61 p=0.80
	20 -25 yrs	44	50.0%	33	37.5%	11	12.5%	88	
	26 -30 yrs	9	64.3%	3	21.4%	2	14.3%	14	
Marital Status	Married	76	51.3%	53	35.8%	19	12.9%	148	χ^2=2.52 p=0.28
	widow	0	0%	1	50.0%	1	50.0%	2	
Locality of Residence	Rural	50	53.2%	36	38.3%	8	8.5%	94	**χ^2=15.11 p=0.01****
	Urban	6	24.0%	11	44.0%	8	32.0%	25	
	Semi urban	20	64.5%	7	22.6%	4	12.9%	31	
Educational Status	No formal education	3	27.3%	7	63.6%	1	9.1%	11	**χ^2=33.57 p=0.001*****
	Primary	9	31.1%	17	58.6%	3	10.3%	29	
	High school	43	61.4%	18	25.7%	9	12.9%	70	
	Higher secondary	17	70.8%	5	20.8%	2	8.3%	24	
	Collegiate Education	4	28.5%	7	50.0%	3	21.4%	14	
	Professional Education	0	0.0%	0	0.0%	2	100.0	2	
Occupation	Home maker	69	53.9%	41	32.0%	18	14.1%	128	χ^2=14.41 p=0.15
	Daily wage Laborer	2	20.0%	7	70.0%	1	10.0%	10	
	Farmer	3	37.5%	5	62.5%	0	0%	8	
	Technical Job	1	100.0%	0	0%	0	0%	1	
	Health Professional	1	50.0%	0	0%	1	50.0%	2	
	Govt employee	0	0%	1	100.0%	0	0%	1	
Educational Status of Husband	No formal education	5	83.3%	0	0%	1	16.7%	6	χ^2=16.55 p=0.12
	Primary	9	23.7%	23	60.5%	6	15.8%	38	
	High school	42	56.0%	21	28.0%	12	16.0%	75	
	Higher secondary	7	100.0%	0	0%	0	0%	7	
	Collegiate Education	7	53.8%	5	38.5%	1	7.7%	13	
	Professional Education	6	54.5%	5	45.5%	0	0%	11	

Occupation of Husband	Daily wage Laborer	41	54.7%	24	32.0%	10	13.3%	75	
	Farmer	14	46.7%	12	40.0%	4	13.3%	30	
	Technical Job	16	50.0%	12	37.5%	4	12.5%	32	
	Health Professional	2	33.3%	3	50.0%	1	16.7%	6	$\chi2=14.44$ p=0.16
	Government Employee	2	33.3%	3	50.0%	1	16.7%	6	
	Others	1	100.0%	0	0%	0	0%	1	
Work pattern	Sedentary	4	23.5%	11	64.7%	2	11.8%	17	**$\chi2=11.45$ p=0.02***
	Moderate	33	47.8%	28	40.6%	8	11.6%	69	
	Strenuous	39	60.9%	15	23.4%	10	15.6%	64	
Type of family	Nuclear family	26	51.0%	20	39.2%	5	9.8%	51	
	Joint family	49	50.5%	33	34.0%	15	15.5%	97	
	Extended family	1	50.0%	1	50.0%	0	0%	2	$\chi2=1.43$ p=0.88
Income of family /month	Rs.1001-3000	28	54.9%	17	33.3%	6	11.8%	51	
	Rs.3001-5000	28	42.4%	26	39.4%	12	18.2%	66	
	Rs.5001-10000	18	58.1%	11	35.5%	2	6.5%	31	$\chi2=6.02$ p=0.42
	>Rs.10000	2	100.0%	0	0%	0	0%	2	
Support group in perinatal period	Parents	63	48.5%	50	38.5%	17	13.1%	130	$\chi2=5.48$ p=0.48
	In-laws	11	64.7%	4	23.5%	2	11.8%	17	
	Husband	1	50.0%	0	0%	1	50.0%	2	
	Relatives	1	100.0%	0	0%	0	0%	1	

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table 27 shows the association between the level of maternal self - esteem of the postnatal mothers in the control group with selected socio - demographic variables.

There was a significant association between the level of self - esteem and locality of residence ($\chi2=15.11$ p=0.01**), educational status ($\chi2=33.57$ p=0.001***), work pattern ($\chi2=11.45$ p=0.02*).

The postnatal mothers who hailed from semi urban area, who were more educated, and mothers who did strenuous work had good self - esteem.

There was no significant association between the level of maternal self - esteem of the postnatal mothers in the control group and selected socio - demographic variables.

Table 28 Association between maternal self-esteem score and socio - demographic variables in the control group

Socio - demographic variables		Mean self-esteem score		One-way ANOVA F-test/t-test
		Mean	SD	
Age	<20 yrs	49.54	15.65	F=0.06 p=0.94
	20 -25 yrs	50.48	15.44	
	26 -30 yrs	50.57	15.11	
Marital Status	Married	50.15	15.11	t=0.14 p=0.87
	Widow	51.17	22.73	
Locality of Residence	Rural	48.80	14.24	**F=3.17 p=0.04***
	Urban	57.16	17.85	
	Semi urban	48.77	15.60	
Educational Status	No formal education	43.00	9.90	**F=2.75p=0.02***
	Primary	46.67	10.86	
	High school	48.03	15.17	
	Higher secondary	49.57	10.10	
	Collegiate Education	54.57	12.00	
	Professional Education	59.17	19.73	
Occupation	Home maker	50.30	15.20	F=0.75 p=0.59
	Daily wage Laborer	53.10	20.79	
	Farmer	43.38	9.84	
	Technical Job	36.00	.	
	Health Professional	57.00	21.21	
	Govt employee	62.00	0.00	
Educational Status of Husband	No formal education	43.83	15.77	F=1.51 p=0.18
	Primary	53.68	17.73	
	High school	50.85	15.24	
	Higher secondary	39.43	3.91	
	Collegiate Education	47.85	11.48	
	Professional Education	46.64	13.22	
Occupation of Husband	Daily wage Laborer	50.48	15.47	F=0.47p=0.79
	Farmer	50.07	16.84	
	Technical Job	49.16	15.30	
	Health Professional	50.67	9.33	
	Government Employee	55.33	14.47	
	Others	31.00	0.00	
Work pattern	Sedentary	46.71	15.46	**F=3.65p=0.03***
	Moderate	50.33	15.51	
	Strenuous	56.18	14.46	
Type of family	Nuclear family	49.39	13.65	F=0.10 p=0.90
	Joint family	50.59	16.34	
	Extended family	51.00	15.56	

Income of family Rs / month	Rs.1001-3000 Rs.3001-5000 Rs.5001-10000 >Rs.10000	49.31 51.58 49.68 34.50	13.67 17.46 13.42 4.95	F=0.93p=0.42
Support group in perinatal period	Parents In-laws Husband Relatives	50.05 50.29 62.50 42.00	16.01 9.28 20.51 0.00	F=0.72 p=0.49

* Significant at P≤0.05, ** significant at P≤0.01, *** very high significant at P≤0.001

Table 28 shows the association between the self – esteem scores of the postnatal mothers in the control with selected socio-demographic variables.

One-way analysis of variance F-test/t-test was done to rule out the association between the level of self esteem and the socio – demographic variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

There was a significant association between the level of maternal self esteem and locality of residence (F = 3.17 p = 0.04*), educational status of the mother (F= 2.75 p=0.02*), and work pattern of the postnatal mothers (F = 3.65 p=0.03*). Statistical significance was calculated using one-way analysis of variance F-test/t-test.

Figure 16 Association between level of maternal self - esteem and socio - demographic variables in the control group

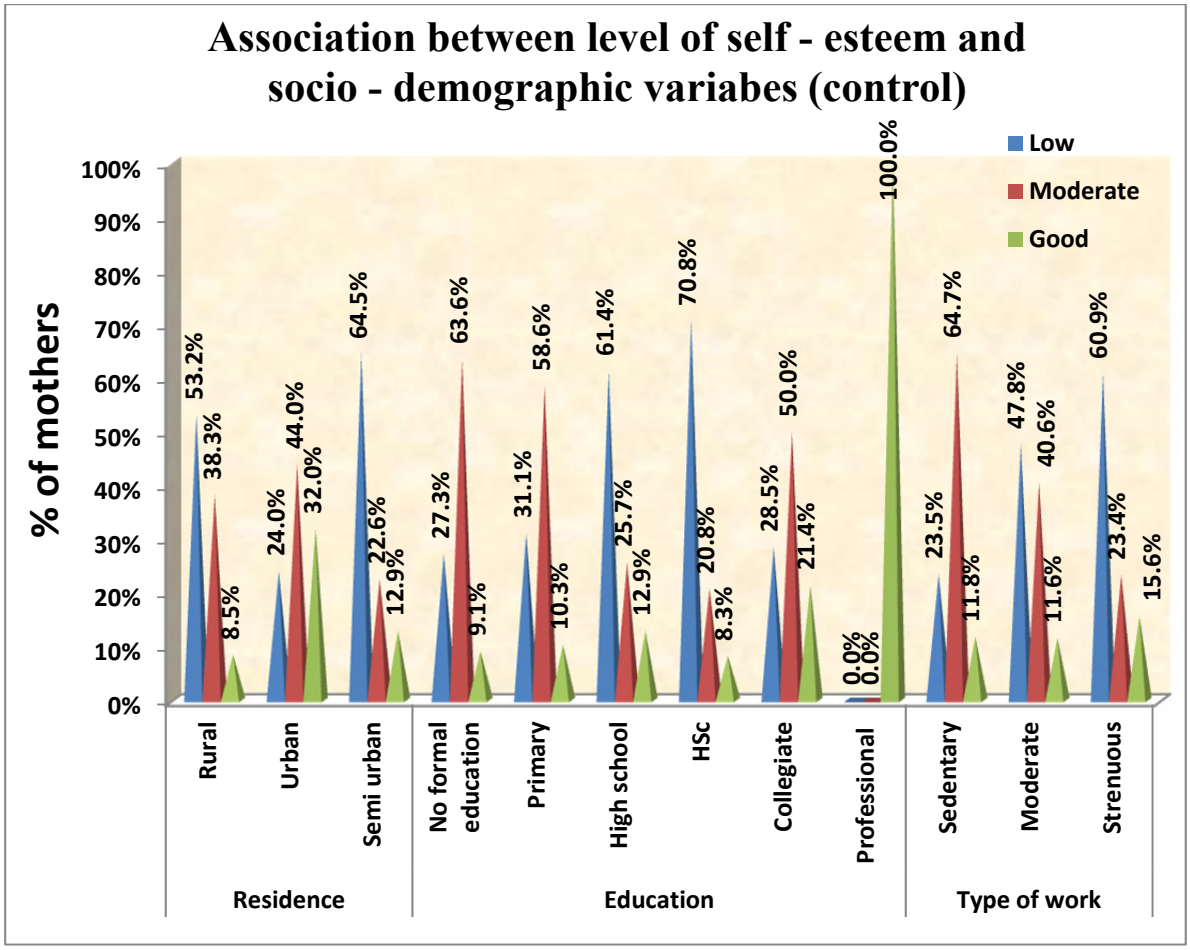


Fig 16 quotes the association between level of maternal self - esteem and socio - demographic variables. There was a significant association between the level of self - esteem and locality of residence, educational status, and work pattern of the postnatal mothers in the control group.

Table 29: Association between level of maternal self - esteem and obstetrical variables in the control group

N = 150

Obstetrical Variables		Level of maternal self - esteem						Total	χ2
		Low		Moderate		Good			
		f	%	f	%	f	%		
Whether registered in antenatal OPD	Yes	74	51.7%	52	36.4%	17	11.9%	143	χ2=5.62
	No	2	28.6%	2	28.6%	3	42.8%	7	p=0.06
If yes number of checkups	0 -3 times	8	57.1%	6	42.9%	0	0%	14	
	4 -6 times	35	53.0%	21	31.8%	10	15.2%	66	χ2=4.29
	7 -9 times	22	43.1%	21	41.2%	8	15.7%	51	p=0.63
	10 -12 times	11	57.9%	6	31.6%	2	10.5%	19	
Previous experience of seeing deliveries/postnatal period	Yes	6	37.5%	8	50.0%	2	12.5%	16	χ2=1.59
	No	70	52.2%	46	34.3%	18	13.5%	134	p=0.45
Stage I	< 10 hrs	23	48.9%	17	36.2%	7	14.9%	47	
	10 -12 hrs	34	54.0%	22	34.9%	7	11.1%	63	χ2=0.69
	>12 hrs	19	47.5%	15	37.5%	6	15.0%	40	p=0.95
Stage II	< 1 hr	39	53.4%	25	34.2%	9	12.3%	73	
	1 - 2 hrs	33	48.5%	26	38.2%	9	13.2%	68	χ2=1.00
	> 2 hrs	4	44.4%	3	33.3%	2	22.2%	9	p=0.99
Stage III	< 10 min	44	59.5%	20	27.0%	10	13.5%	74	
	10- 20 min	27	47.4%	25	43.9%	5	8.8%	57	**χ2=10.07**
	> 20 min	5	26.3%	9	47.4%	5	26.3%	19	**p=0.04***
Mode of Delivery	Normal with episiotomy	70	49.6%	52	36.9%	19	13.5%	141	χ2=1.02
	Forceps	6	66.7%	2	22.2%	1	11.1%	9	p=0.59
Sex of the child	Male	47	54.0%	28	32.2%	12	13.8%	87	χ2=1.33
	Female	29	46.0%	26	41.3%	8	12.7%	63	p=0.51
Birth weight of the Baby	< 1.5 kgs	6	60.0%	2	20.0%	2	20.0%	10	
	1.5 - 2.0 kgs	34	56.7%	18	30.0%	8	13.3%	60	χ2=4.45
	2.1 - 3.0 kgs	34	44.2%	33	42.9%	10	13.0%	77	p=0.61
	3.0 - 3.5 kgs	2	66.7%	1	33.3%	0	0%	3	

Congenital anomalies of the child	Yes	7	53.8%	6	46.2%	0	0%	13	$\chi 2=2.33$
	No	69	50.4%	48	35.0%	20	14.6%	137	p=0.31
Health status of the child	Healthy	58	45.7%	50	39.3%	19	15.0%	127	$\chi 2=1.30$
	Sick	18	78.3%	4	17.3%	1	4.4%	23	p=0.52
History of any complications During pregnancy	Yes	3	50.0%	3	50.0%	0	0%	6	$\chi 2=1.17$
	No	73	50.7%	51	35.4%	20	13.9%	144	p=0.56
Family History of any complication during pregnancy	Yes	2	66.7%	1	33.3%	0	0%	3	$\chi 2=0.56$
	No	74	50.3%	53	36.1%	20	13.6%	147	p=0.75

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001.

Table 29 shows the association between the level of maternal self - esteem and selected obstetrical variables in the control group among postnatal mothers admitted at Government Rajaji Hospital, Madurai in the control group.

There was a significant association between the level of maternal self - esteem and IIIrd stage of labour ($\chi 2=10.07$ p=0.04*).

The postnatal mothers whose duration of labour in the III stage less than 10 minutes had good self - esteem.

There was no significant association between the level of maternal self - esteem and the other selected obstetrical variables among the postnatal mothers admitted at Government Rajaji Hospital, Madurai, in the control group.

Table 30 Association between self-esteem and obstetrical variables in the control group

Obstetrical variables		Mean self-esteem score		One-way ANOVA F-test/t-test
		Mean	SD	
Whether registered in antenatal OPD	Yes	51.39	15.52	t=0.58 p=0.56
	No	47.86	14.95	
If yes number of checkups	0 -3 times	50.79	13.07	F=0.31 p=0.81
	4 -6 times	51.32	15.88	
	7 -9 times	52.77	16.60	
	10 -12 times	48.68	13.79	
Previous experience of seeing deliveries/postnatal period	Yes	54.63	12.53	t=0.86 p=0.34
	No	50.82	15.76	
Stage I	< 10 hrs	54.62	16.00	F=1.66 p=0.19
	10 -12 hrs	49.54	13.85	
	>12 hrs	49.90	16.91	
Stage II	< 1 hr	50.79	14.64	F=0.22 p=0.79
	1 - 2 hrs	52.01	16.15	
	> 2 hrs	48.78	18.03	
Stage III	< 10 min	51.16	14.89	F=1.51 p=0.23
	10- 20 min	49.51	15.36	
	> 20 min	56.63	17.50	
Mode of Delivery	Normal with episiotomy	51.14	15.65	t=0.26p=0.79
	Forceps	52.56	12.80	
Sex of the child	Male	51.34	16.32	t=0.10 p=0.93
	Female	51.06	14.32	
Birth weight of the Baby	< 1.5 kgs	58.50	12.05	F=1.21 p=0.30
	1.5 - 2.0 kgs	51.22	17.20	
	2.1 - 3.0 kgs	50.69	14.38	
	3.0 - 3.5 kgs	41.00	11.36	
Congenital abnormalities of the child	Yes	50.15	9.56	t=0.26 p=0.79
	No	51.33	15.93	
Health status of the child	Healthy	51.31	15.85	t=0.15 p=0.88
	Sick	50.78	13.41	
History of any complications During pregnancy.	Yes	52.67	12.39	t=0.22p=0.81
	No	51.17	15.61	
Family History of any complication during pregnancy	Yes	51.33	16.29	t=0.01 p=0.99
	No	51.22	15.50	

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001

Table 30 shows the association between the self – esteem scores of the postnatal mothers in the control group with selected obstetrical variables.

One-way analysis of variance F-test/t-test was done to rule out the association between the level of self esteem and the obstetrical variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

There was no significant association between the level of maternal self esteem and the obstetrical variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai. Statistical significance was calculated using one-way analysis of variance F-test/t-test.

Figure 17 Association between level of maternal self - esteem and obstetrical variables in the control group

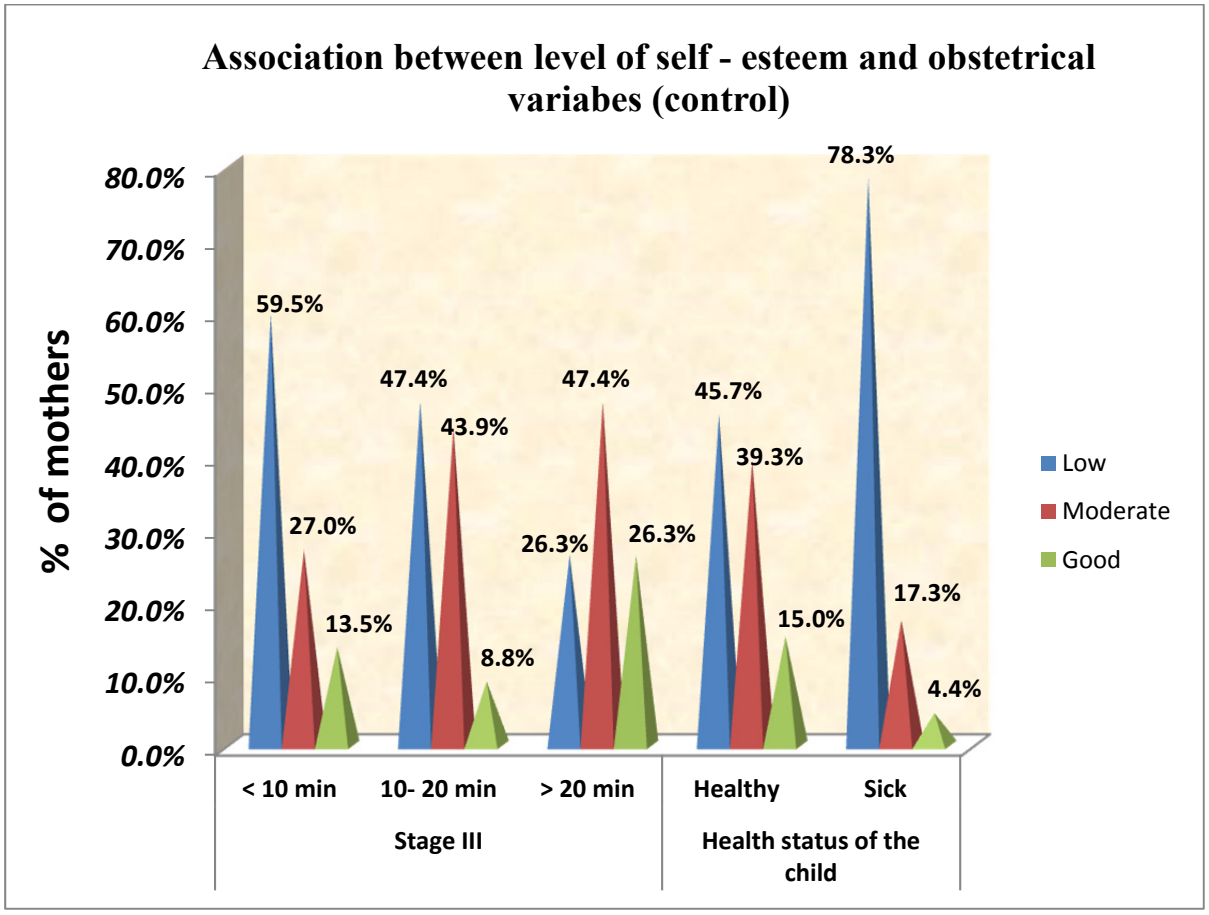


Fig 17 exhibits the association between level of maternal self - esteem and obstetrical variables. There was a significant association between the level of maternal self - esteem and IIIrd stage of labour among the postnatal mothers in the interventional group.

Table: 31 Relationship between post - test postnatal Blues and Maternal self - esteem among postnatal mothers in the interventional and the control group

N = 300

Group	Variables	Mean ± SD	Karl Pearson Correlation Coefficient
Interventional Group	Postnatal blues and maternal self - esteem	45.37±22.22 76.05±16.82	**r= -0.55 P=0.01****
Control Group	Postnatal blues and maternal self - esteem	70.05±16.82 50.18±15.38	**r= -0.14 P=0.34**

**** P≤0.01**

In order to find out the relationship between the postnatal blues and maternal self - esteem of the interventional and the control group, Pearson correlation coefficient was calculated.

The findings in table 31, suggests that there was a negative correlation between postnatal blues and maternal self - esteem, in the control group, i.e. when the postnatal blues of the postnatal mother increases their maternal self - esteem will decrease moderately.

Whereas in the interventional group there was a negative correlation between postnatal blues and maternal self - esteem at $P < 0.01$ level, among the postnatal mothers admitted at Govt Rajaji Hospital, Madurai, i.e. when maternal self - esteem of the postnatal mother's increases their postnatal blues decreases and vice versa. This finding was also supported by a study done by Sowislo which revealed a strong relationship between self-esteem and postnatal blues but a weak one for depression and self-esteem. Sowislo found that decreases in self-esteem were predictive of increases in blues.

Figure 18 Relationship between postnatal blues and maternal self - esteem in the interventional group

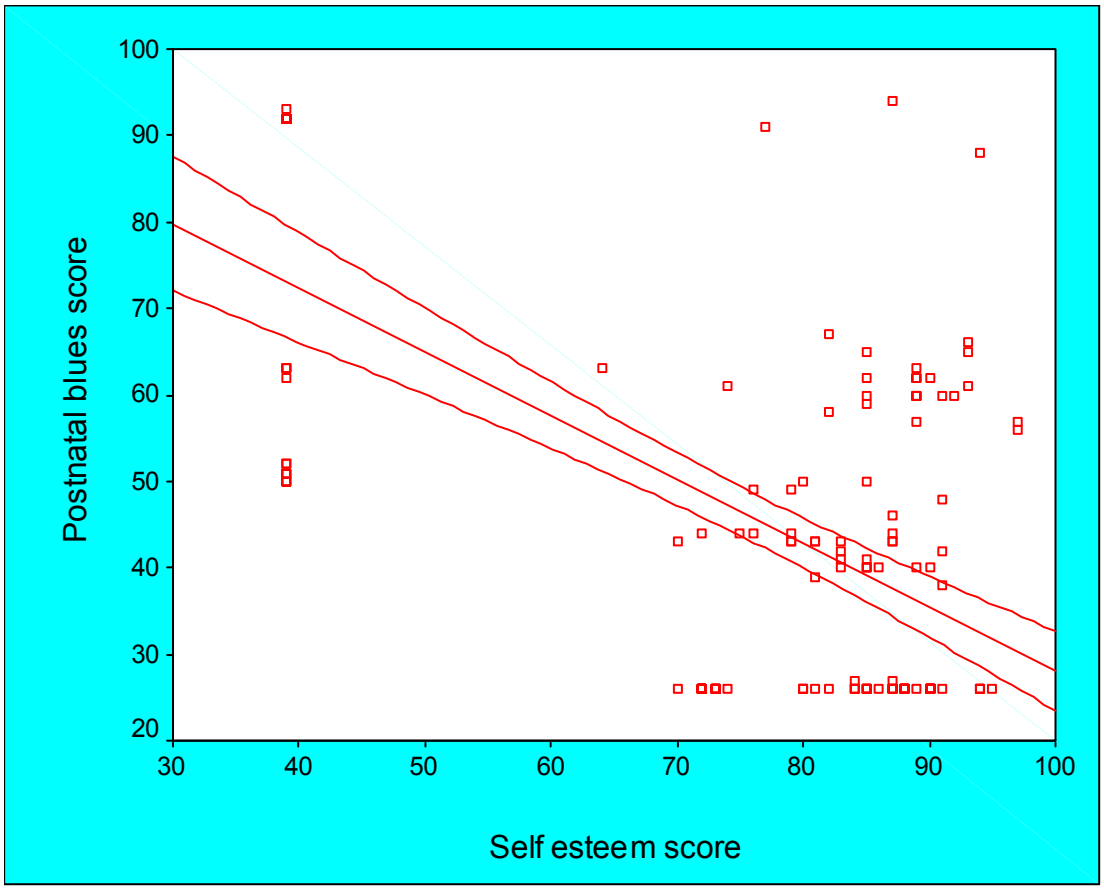


Fig 18 identifies the relationship between postnatal blues and maternal self – esteem. There was a negative correlation between self - esteem and postnatal blues scores among postnatal mothers in the interventional group.

Figure 19 Relationship between postnatal blues and maternal self - esteem in the control group

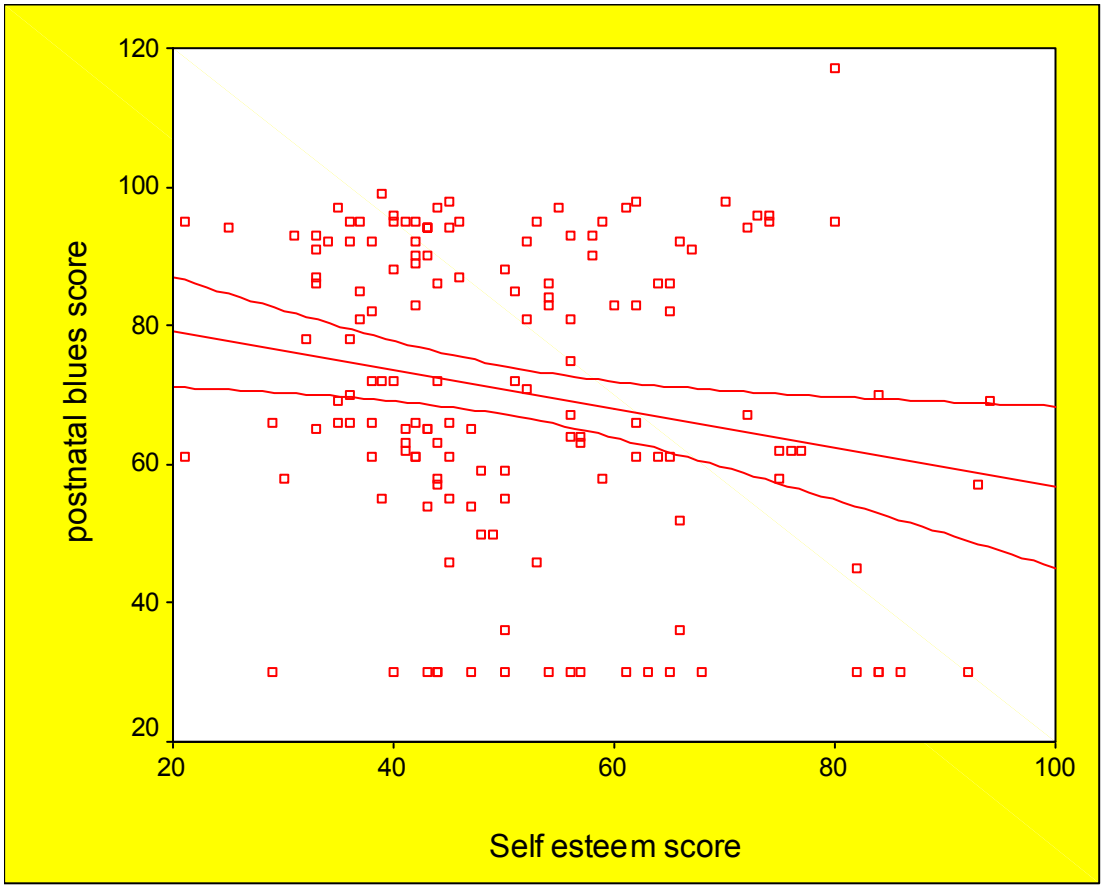


Fig 19 depicts a scatter plot with regression estimate showing negative correlation between self - esteem and postnatal blues scores among postnatal mothers in the control group.

Table 32 Factors influencing the reduction of postnatal blues among postnatal mothers in the interventional group.

N = 150

Influencing factors	P-value	Unadjusted OR(95%CI)#	P-value	Adjusted OR(95%CI)##
Place of residence(semi urban)	0.01**	2.3 (1.1- 5.4)	0.11	2.1 (0.8- 8.7)
Education status (collegiate)	0.001**	16.5(4.5- 71.7)	0.001***	10.8 (2.9- 22.8)
Husband education(collegiate)	0.001***	6.8 (2.3- 21.5)	0.01**	1.7 (1.1- 9.1)
Type of family(joint/extended))	0.001***	3.2 (1.5- 7.2)	0.001***	2.7 (1.3 - 9.5)
Stage I(<12 hours)	0.002**	3.6 (1.4- 9.5)	0.03*	1.6 (1.1 – 11.6)

Univariate ## Multivariate,

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001.

Table 32 specifies the factors influencing for the reduction of postnatal blues among postnatal mothers in the interventional group admitted at Government Rajaji Hospital, Madurai. Univariate and Multivariate regression analysis was done.

Univariate analysis of chi-square test identified that place of residence, education status, educational status of husband, type of family and duration of labour in stage I were the significant contributing factors for reducing postnatal blues among postnatal mothers in the interventional group. Adjusted odds ratio using multivariate logistic regression also identified that educational status, educational status of husband, type of family and duration of labour in stage I were the significant contributing factors for reducing postnatal blues among postnatal mothers in the interventional group.

Table 33 Factors influencing for increasing maternal self - esteem among postnatal mothers in the interventional group.

N = 150

Influencing factors	P-value	Unadjusted OR(95%CI)#	P-value	Adjusted OR(95%CI)##
Age(>20)	0.03*	2.2(1.1- 4.7)	0.05*	1.8(1.0- 9.9)
Type of family(joint/extended)	0.001***	2.9(1.3- 6.5)	0.01**	1.6(1.1- 8.3)
Monthly income(>Rs.3000)	0.001***	3.3(1.5- 7.2)	0.01**	2.0(1.2 - 9.6)
Stage III(<10 min)	0.05*	1.8(1.1- 3.6)	0.12	1.6(0.8 – 12.1)

* Significant at P≤0.05, ** significant at P≤0.01, *** significant at P≤0.001, # Univariate

Multivariate

Table 33 specifies the factors influencing for increasing maternal self - esteem among the interventional postnatal mothers admitted at Government Rajaji Hospital, Madurai. Univariate and Multivariate regression analysis was done.

Univariate analysis of chi-square test identified that age, type of family, monthly income, duration of labour in stage III were the significant contributing factors for increasing self - esteem among postnatal mothers in the interventional group.

Adjusted odds ratio using multivariate logistic regression also identified that age, type of family, monthly income were the significant contributing factors for increasing self - esteem among postnatal mothers in the interventional group.

CHAPTER V

DISCUSSION

The birth of a healthy baby is a joyous occasion for the mother and her family. Even the troubles and sufferings underwent by the pregnant women are accepted with a gentle smile. Motherhood involves emotions such as silence, denial of the self, and much dedication which cannot be explained in words, as quoted by many authors.

Women's, particularly, pregnant women's reproductive system has an impact over the mother's psychological aspect. The fluctuating hormone levels always initiates mood disorders among the pregnant women. It also accelerates the symptoms of mood disorders and causes emotional instability making them victims to postnatal depression. The treatment aspects associated with this mental illness becomes more complicated during antenatal, labour, and child birth and in the postnatal period. During this time, the presence of a nurse and her contact with the postnatal woman help to identify the problem and help them to get treatment or referral to a specialized area for further care. It also helps to prevent the condition in future.

The researcher felt that, when postnatal mothers are equipped with the ways of how to adjust with the postpartum period, their chances for severe blues might lessen and on the other hand, if the postnatal blues of the postnatal mothers reduces, the maternal self - esteem of the postnatal mothers eventually increases.

Hence, the study aimed in evaluating the effectiveness of complementary and alternative therapies in terms of postnatal blues and maternal self - esteem among the postnatal mothers admitted at Government Rajaji Hospital, Madurai. The study findings from the interview conducted and data collected are elicited here to provide a clear understanding of the postnatal mother's feelings.

The sample included 300 postnatal mothers who were assigned randomly to the interventional group (N = 150) and to the control group (N = 150) respectively.

5.1. Description of socio - demographic variables of the postnatal mothers in the interventional and the control group were as follows.

An analysis of the socio - demographic variables and the obstetrical variables of the postnatal mothers were examined

It is interesting to note that while mentioning about the age group of the postnatal mothers, majority of the postnatal mothers 92(61.3%) in the interventional group and 88 (58.7%) in the control group belonged to the age group between 20 – 25 years.

While stating the marital status almost an equal proportion of postnatal mothers, 147(98%) in the interventional group and 148 (98.7%) in the control group were married respectively.

When comparing locality of residence majority of the postnatal mothers, 89 (59.3%) in the interventional group and 94 (62.7%) in the control group hailed from rural areas.

Regarding level of education of the postnatal mothers, high school education dominated the interventional group 67(44.7%) and the control group 70 (46.7%).

With respect to the occupation of the postnatal mother, almost equal number of them 127(84.7%) in the interventional group and 128(85.3%) in the control group were home makers.

While mentioning the education level of the husband of postnatal mothers, high school education dominated the interventional group 84(56%) and the control group 75 (50%). While comparing the husband's occupation, majority of them 77 (51.3%) in the interventional group and 75(50%) in the control group were daily wage labourers.

Regarding the type of work pattern of the postnatal mothers, strenuous work pattern was practised by 71(47.3%) in the interventional group, where as in the control group majority of them 69 (46%) practised moderate work pattern.

Joint family living was practised by a vast proportion of the postnatal mothers 94 (62.7%) in the interventional group and 97 (64.7%) in the control group respectively.

A monthly income between Rs 3001 to Rs 5000 was prevalent among both the groups, 62 (41.3%) in the intervention group and 66 (44%) in the control group respectively.

Analysis of the support group during perinatal period showed that majority of the postnatal mothers, 127 (84.7%) in the interventional group and 130 (86.7%) in the control group were cared by their parents.

5.2. While introspecting the obstetrical variables of the postnatal mothers, it revealed that majority of them 141 (94%) in the interventional group and 143 (95.3%) in the control group have been registered in the antenatal outpatient department and among them 75 (53.1%) in the interventional group and 63 (44.1%) in the control group underwent antenatal checkups between 4 – 6 times.

Comparison of previous experience of witnessing deliveries or postnatal period, almost equal number of the postnatal mothers, 131 (87.3%) in the interventional group and 134 (89.3%) in the control group did not have an exposure of witnessing deliveries or postnatal period or caring to a person in postnatal period.

Regarding the duration of stages of labour, majority of the postnatal mothers 66 (44%) and 63 (42%) had a duration of 10 – 12 hours in first stage of labour in the interventional and control group respectively. In second stage of labour, almost equal number of postnatal mothers 69 (46%) and 68 (45.3%) had a duration between 1 – 2 hours in the interventional and control group respectively. In the third stage of labour majority of the postnatal mothers 70 (46.7%) in the interventional group and 74 (49.3%) in the control group had a duration less than 10 minutes.

While portraying the mode of delivery, normal delivery with episiotomy dominated both the groups, 140 (93.3%) in the interventional group and 141 (94%) in the control group respectively.

Almost equal distribution of male babies 89 (59.3%) and 87 (58%), and female babies 61 (40.7%) and 63 (42%) were born to the postnatal mothers in the interventional group and control group respectively.

A larger proportion of the postnatal mothers in the interventional group 79 (52.7%) and in the control group 77 (51.3%) had given birth to babies who weighed between 2-3 Kgs.

More number of postnatal mothers 136 (90.7%) in the interventional group and 137 (91.3%) in the control group had babies without congenital abnormalities and majority of the postnatal mothers 126 (84%) in the interventional group and 127 (84.7%) in the control group had healthy babies.

Majority of the postnatal mothers 145 (96.7%) in the interventional group and 144 (96%) in the control group had no history of complications during pregnancy.

An equal number of postnatal mothers 147 (98%) in both the interventional and the control group had no family history of any complication during pregnancy. (Table 1 and 2)

The first objective of the study was to assess the post - test level of postnatal blues and self - esteem among the postnatal mothers in the interventional group and control group.

5.3. Level of postnatal Blues

In the Interventional group majority of the postnatal mothers 66 (44%) of them had no postnatal blues, 49 (32.7%) of them had mild postnatal blues, 17 (11.3%) of them had moderate postnatal blues and 18 (12%) of them had severe blues in the post - test after 10 sessions complementary and alternative therapies. Whereas in the control group majority of them 69 (46%) of them had moderate postnatal blues, 20 (13.3%) of the postnatal mothers had no postnatal blues, 21 (14%) of them had mild postnatal blues, and 40 (26.7%) of them had severe postnatal blues in the post test.

There was a significant difference between the interventional and the control group $\chi 2=75.6$ which was significant at 0.001 level. (Table: 3)

This finding was congruent with the study done by Judith Lumley, 2005 that Post natal blues is an important disorder which occurs in one among eight child birth. Hence, more support is needed for the postnatal women in the postnatal period.[9]

The decrease in the level of postnatal blues in the interventional group was due to the intervention i.e., complementary and alternative therapies which explained about the postnatal mothers rest, sleep, baby care from the prophylactic information and it was also due to the support given by the family members either the husband or from significant others in the family during the postnatal period, which met the needs of the postnatal mother.

This finding was also congruent with the findings of Malagnino F. who stated that approximately more than half i.e. three fourth of the pregnant women after child birth experience depression during the early postpartal period. Primiparas, mothers who had traumatic delivery such as forceps delivery or cesarean section, and those who had a nightmare experience during perinatal period and those with a family history of complications during pregnancy are most vulnerable to puerperal blues.[136]

The findings were also supported by a study by Adewuya who quoted that preexisting level of baby blues was 31.3%, and it peaked on the fifth day after child birth. The risk factors or contributing factors to maternity blues were frequent mood swings, past admission during the pregnancy, delivering a female baby, and single mothers without a husband. The investigator concluded that the prevalence and the predisposing factors differed across culture.[56]

The findings were also consistent with the findings of Kosińska-Kaczyńska who revealed that low educational level, reduced or no family support; complications during antenatal period, and mothers previous histories of any depression were the accelerating factors and influenced the postpartal affect. Order of parity, surgical delivery, area of living, work, marital status, socio - economic level, and breast feeding showed no relationship with maternity blues. The mothers in the developing countries were at higher risk for maternity blues.[67]

5.4. Comparison of question wise postnatal blues scores

When comparing the question wise response of the postnatal blues among the postnatal mothers, 132 (92%) of the postnatal mothers in the interventional group had no problems such as crying continously without being able to stop. 91 (60.7%) of the postnatal mothers had no difficulty in expressing their feelings. 90 (60%) of the postnatal mothers were not feeling apprehensive or tension. 89 (59.3%) had no depressive thoughts. 78 (52%) and 89 (59.3%) of the postnatal mothers did not feel tiredness and irritable respectively.

Whereas, on the other hand, 102 (68%) of the postnatal mothers found difficulty in concentrating on things happening around them. 97 (64.7%) of the postnatal mothers were not mentally relaxed. 82 (54.7%) of the postnatal mothers did not have optimistic ideas.74 (49.3%) of the postnatal mothers did not have a cordial relationship with their husband and their family members. 93 (62%) of the postnatal mothers felt that they were not motivated in accomplishing their goals and 116 (77.3%) of the postnatal mothers felt that they lacked in self - confidence and also felt that they didn’t have self respect.

When comparing the question wise response of the postnatal blues among control group. 74(49.3%) of the postnatal mothers in the control group did not feel like crying continously without stopping. 59 (39.3%) of the postnatal mothers did not

want to be alone. 55 (36.7%) of the postnatal mothers had good relationship with their husband and their family members. 45 (30%) of the postnatal mothers felt hopeful and had optimistic ideas. 62 (41.3%) of the postnatal mothers in the control group felt that they had adequate rest and sleep.

Whereas, on the other hand, 52 (34.7%) of the postnatal mothers in the control group felt that they were not confident. 44(29.3%) of the postnatal mothers were mentally tensed up. 50 (33.3%) of the post natal mothers suffered with frequent mood changes. 64 (42.7%) of the postnatal mothers felt they were restless and 49 (32.7%) were not mentally relaxed. 52 (34.7%) of the postnatal mothers in the control group felt that they were not confident.

The mean post - test question wise scores of postnatal blues among postnatal mothers in the interventional group were lesser than the mean post - test question wise scores of postnatal blues among postnatal mothers in the control group. This shows that there was a statistically significant difference in the question wise postnatal blues scores.

Independent “t” test was done to find out the difference between the interventional and the control group. The findings revealed that statistically there was a significant difference between interventional and control group of postnatal mothers. Thus it can be proved that the difference between the interventional and the control group was due to the intervention (complementary and alternative therapies) which had an impact on the question wise blue scores. Thus it can be inferred that 10 sessions of complementary and alternative therapies along with routine care was beneficial to the postnatal mothers.

These findings reported that the postnatal blues are greatly associated with the traumatic physiological events following delivery. Similar findings were reported by Hein Roth. [3]

5.5. Level of Self - esteem

While comparing the level of Maternal self - esteem, in the Interventional group majority of the postnatal mothers 90 (60%) of them had good maternal self - esteem, 26 (17.3%) of the postnatal mothers had low maternal self - esteem, 34 (22.7%) of them had moderate maternal self - esteem, after 10 sessions of complementary and alternative therapies, whereas in the control group majority 76 (50.6%) of the postnatal mothers had low maternal self - esteem, 54 (36%) of them had moderate maternal self - esteem, and only 20 (13.3%) of the postnatal mothers had good maternal self - esteem.

There was a significant difference between the interventional and the control group $\chi 2=73.6$ which was significant at 0.001 level. (Table: 8). This difference in the postnatal blue scores and maternal self - esteem scores between the interventional and the control group may be due to the intervention i.e. 10 sessions of complementary and alternative therapies.

This study finding was supported by a study done by Melinda Smith, who has reported that the symptoms of antenatal depression may include low self-esteem, inadequacy feelings, feelings of guilt, continuous crying without being able to stop, sleep disturbances, and severe apprehension. Fathers may also have a lower self - esteem before and after the child birth.[137]

This finding was also consistent with a study done by Farrow who stated that strong emotions during the antenatal period and stress related to maternal core beliefs during pregnancy was associated with prenatal maternal self-esteem. The presence of previous psychological or psychiatric disorders paved way 41% of postnatal maternal self - esteem. Hence, the maternal cognitive structures is an important factor that determines and leads to the development of maternal self-esteem.[76]

The finding of this study was also consistent with a study done by Sarah who stated that infant complications, presence of congenital abnormalities in the babies, serve as contributory factors for maternal self-esteem. Whereas, greater depressive symptoms exacerbate the decrease in maternal self-esteem.[138]

5.6. Comparison of question wise maternal self - esteem scores

When comparing the question wise response of the maternal self - esteem among the postnatal mothers, 76 (50.7%) of the postnatal mothers in the interventional group did not care themselves well during pregnancy. 82 (54.7%) of the postnatal mothers felt that pregnancy and delivery was not a rewarding experience. 81 (54%) of the postnatal mothers felt that they did not have energy to take care of their babies. 83 (55.3%) of the postnatal mothers felt that they were not confident and they had problems in having a warm relation with their babies. 78 (52%) of the postnatal mothers felt that they were not confident to teach their babies new things. 85 (56.7%) of the postnatal mothers in the interventional group felt that they not adequate to care their babies.

Whereas, 91 (60.7%) of the postnatal mothers were not disappointed with the sex of the child. 86(57.3%) of the postnatal mothers felt that they didn't worry whether their baby will develop normally. 83 (53.3%) of the postnatal mothers did not need more time to adjust towards their baby. 84 (56%) of the postnatal mothers felt that they were not a failure as a mother. 109 (72.7%) of the postnatal mothers felt that they were emotionally secure to care for their babies. 86 (57.3%) of the postnatal mothers did not worry whether their baby will like them and 77 (51.3%) of the postnatal mothers in the interventional group them felt that they did not worry about their figure or body image would change after the delivery.

When comparing the question wise response of the maternal self - esteem among the postnatal mothers in the control group, 42 (28%) of the postnatal mothers in the control group felt that they did not care themselves well during pregnancy. 64 (42.7%) of the postnatal mothers felt guilty of delivering a baby into this world full of troubles. 59 (39.3%) of the postnatal mothers felt that they were a failure as a mother. 73 (48.7%) of the postnatal mothers were worried about whether their baby will develop normally. 80 (53.3%) of the postnatal mothers worried that they were not able to meet the emotional needs of the baby and 71 (43.7%) of the postnatal mothers in the control group were worried that their figure and body image would change after delivery.

Whereas, on the other hand, 51 (34%) of the postnatal mothers in the control group felt that delivery and labour was one of the best experience in their life. 76 (50.7%) of the postnatal mothers were confident that their babies will be strong and healthy. 57 (38%) of the postnatal mothers felt that they were emotionally prepared for their baby's birth. 74(49.3%) of the postnatal mothers were willing to stay at home to care for their baby. 93 (62%) of the postnatal mothers felt that they had plenty of energy to take care of their baby.

The mean post - test question wise scores of maternal self - esteem among postnatal mothers in the interventional group was greater than the mean post - test question wise scores of maternal self - esteem among postnatal mothers in the control group. This shows that there was a statistically significant difference in the question wise postnatal maternal self - esteem scores.

Independent “t” test was done to find out the difference between the interventional and the control group. The findings revealed that statistically there was a significant difference between interventional and control group of postnatal mothers. Thus it can be proved that the difference between the interventional and the control group was due to the intervention (complementary and alternative therapies) which had an impact on the question wise maternal self - esteem scores. Thus it can be inferred that 10 sessions of complementary and alternative therapies along with routine care was beneficial to the postnatal mothers.

The second objective of the study was to evaluate the effectiveness of complementary and alternative therapies in terms of postnatal blues and self - esteem among postnatal mothers between the interventional group and Control group.

5.7. The post - test mean postnatal blue scores was 45.37 with a standard deviation of 22.23 in the interventional group, where as the post - test mean postnatal blue scores in the control group was 70.34 with a standard deviation of 22.15.

The independent "t" test was done to find out the difference between the interventional and the control group. The independent "t" 9.74, was greater than the table value which was significant at 0.001 level. There was a significant difference in the post - test mean postnatal blue scores between the interventional group and the control group. This shows that the difference in the scores was due to the intervention (complementary and alternative therapies) and also this proves that the intervention was effective in reducing the postnatal blues among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

5.8. While comparing the postnatal blues, there was a significant difference in the levels of postnatal blues between the interventional group and the control group. The post - test mean blue scores in the interventional group was 45.37 (S.D. 22.23) which was lower than the mean blue scores 70.34, (S.D. 22.15) among the postnatal mothers in the control group. The calculated't' value 9.74 was higher than the table value which was significant at 0.001 level.

Hence, the stated hypothesis H1 "The mean blues scores of the postnatal mothers who receive complementary alternative therapies will be significantly lower than the mean blue scores of the postnatal mothers who do not receive complementary and alternative therapies" was accepted.

5.9. When comparing the maternal self - esteem of the postnatal mothers between the interventional and the control group quotes that there was a significant difference in the levels of self - esteem between the interventional group and the control group. The post - test mean self - esteem scores in the interventional group was 76.05 (S.D. 16.83) which was higher than the mean self - esteem scores 50.19, (S.D. 15.38) among the postnatal mothers in the control group. The calculated‘t’ value 13.89 was higher than the table value which was significant at 0.001 level.

Independent “t” test was done to rule out the difference between the interventional and the control group. The calculated Independent “t” was 13.89 and it was greater than the table value which was significant at 0.001 level. There was a significant difference in the mean post - test maternal self - esteem scores between the interventional group and the control group. This shows that the difference in the scores was due to the intervention (complementary and Alternative Therapies) and also this proves that the intervention was effective in improving the maternal self - esteem among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

Hence, this shows that the intervention 10 sessions of complementary and alternative therapies was effective in reducing the postnatal blues and in improving the maternal self - esteem among the postnatal mothers who were admitted at govt Rajaji Hospital, Madurai.

On an average, in the study the analysis reported a reduction of postnatal blues by 20.8% among the postnatal mothers in the interventional group than the postnatal mothers in the control group. On the other hand, on an average, the maternal self - esteem was improved by 25.9% among postnatal mothers in the interventional group than the postnatal mothers in the control group.

Differences between the interventional and the control group post - test score was analysed using proportion with 95% Confidence Interval and mean difference with 95% Confidence Interval.

This difference shows the effect of complementary and alternative therapies on postnatal blues and maternal self - esteem.

This finding of the study was consistent with a study done by Imura which revealed that Mothers who received guided imagery had reduced postnatal blues, reduced anxiety, and improved status of mood, than the postnatal mothers in the control group who received standard postpartal care. Hence, guided imagery was an effective intervention for postpartum mothers to improve their physical and mental status and to facilitate mother- child interaction.[104]

This finding was also supported by a study done by Barbara L. Rees, who explored that the primipara mothers who underwent guided imagery with relaxation had decreased in their anxiety and depression, and improved in their self-esteem than the control group.[82]

This study finding was also consistent with the findings of Ahn YM, Kim MR who revealed that the home visiting discharge information raised their self - esteem scores and on the other hand lowered the adjustment scores and the maternal blues scores.[25]

The findings were consistent with the findings of Kylie Armstrong who quoted that mothers who belonged to the exercise group and practised pram-walking improved in their fitness level and reduced in their symptoms associated with depression. There was a direct association between the reduction in the level of postnatal blues and improvement in fitness. Hence, pram-walking exercise, programmes can be implemented among mothers to reduce their postnatal blues.[102]

It was also supported by chabrol in which providing information on postpartum blues during the third trimester of pregnancy reduces the blues symptomatology. This also confirms the importance of considering social support as a major causative factor to postpartum blues.[107]

The findings were also consistent with the findings of Moffat which revealed that pregnant women who underwent guided imagery had lower postnatal blues, reduced anxiety, lowered blood pressure over time than those who were allocated to quiet rest.[115]

Hence, the stated hypothesis H2 "The mean self - esteem score of the postnatal mothers who receive complementary alternative therapies will be significantly higher than the mean self - esteem scores of the postnatal mothers who do not receive complementary and alternative therapies" was accepted.

The third objective of the study was to find out the association between the level of postnatal blues with selected socio - demographic, obstetrical variables among postnatal mothers in the interventional group.

5.10. a. Chi square analysis revealed that there was a significant association between the level of postnatal blues and locality of residence ($\chi 2=19.1$ p=0.004**), educational status of the mother ($\chi 2=55.3$ p=0.001***), educational status of husband ($\chi 2=51.1$ p=0.001***), type of family ($\chi 2=13.5$ p=0.04*), i.e. postnatal mother's who hailed from semi urban background, with higher educational background - professional education, postnatal mothers whose husband had higher educational back ground - collegiate education and those who lived in joint family, extended families had no postnatal blues when compared with other socio - demographic variables, and these postnatal mothers were benefitted more as compared with the other socio - demographic variables.

5.10.b. When comparing the obstetrical variables, chi square analysis revealed that there was a significant association between the level of postnatal blues and antenatal OPD registration ($\chi 2=10.39$ p=0.01**), less duration of stage I, ($\chi 2=13.92$ p=0.03*), stage II ($\chi 2=12.97$ p=0.04*), and stage III ($\chi 2=26.66$ p=0.01**). Postnatal mothers, who had registered themselves in antenatal OPD, Mothers whose first stage of labour was less than 10 hrs duration, mothers whose 2^{nd} stage of labour was between 1 – 2 hrs of duration, and mothers whose 3^{rd} stage of labour was less than 10 minutes had no postnatal blues when compared with other obstetrical variables, and were benefitted more.

Bordeaux also supports the findings; who quoted that the occurrence of the postnatal blues was dependent on the type of pregnancy, a low maternal self-esteem, and a high level of stress related to baby care, lesser educational status, lower income of the mother, leads to emotional instability, which affects the mood of the postnatal mother leading to mood disorders. [139]

Kennerly also supports the findings; where Blues scores were significantly associated with neuroticism; anxiety and depressed mood during pregnancy; fear of labour; poor social adjustment; and retrospective severity of pre-menstrual tension. Blues scores were not associated with obstetric factors, such as mothers with a previous history of psychiatric disorder.[60]

Boudou also was consistent with this study finding; who mentioned that there was a significant association between the level of postpartum blues and its occurrence with the affective aspect of childbirth, pain during labour, previous history of complications during pregnancy, and longer durations of stage of labour.[68]

Hence, the Stated Hypotheses H3 "There will be a significant association between the level of postnatal blues and selected Socio - demographic, obstetrical variables among the postnatal mothers in the interventional group" was accepted.

The fourth objective of the study was to find out the association between the level of postnatal blues with selected socio - demographic, obstetrical variables among postnatal mothers in the control group.

5.10.c. Chi – Square analysis was done to rule out the association between the level of postnatal blues and the socio - demographic variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

There was a significant association between the level of postnatal blues and age ($\chi 2=5.84 p=0.05^*$) postnatal mothers who belonged to the age group between 26 – 30 years, work pattern ($\chi 2=12.34$ $p=0.05^*$) postnatal mothers who worked a strenuous work or who were heavy workers had no postnatal blues when compared with other socio - demographic variables.

There was no significant association between the level of postnatal blues and the other socio - demographic variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

5.10.d. whereas, while comparing the Chi – Square analysis between the level of postnatal blues and the obstetrical variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

There was a significant association between the level of postnatal blues and presence congenital abnormalities of the child ($\chi 2=18.78$ $p=0.01^{**}$), health Status of the child ($\chi 2=8.98$ $p=0.03^*$). The mothers who delivered a child without any congenital abnormalities and those who had a healthy child had no postnatal blues when compared with other obstetrical variables in the control group.

There was no significant association between the level of postnatal blues and the other obstetrical variables in the control group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

Hence, the stated Hypotheses H4 "There will be a significant association between the level of postnatal blues and selected Socio - demographic, obstetrical variables among the postnatal mothers in the control group" was accepted.

The fifth objective of the study was to find out the association between the level of self - esteem and selected socio - demographic, obstetrical variables among postnatal mothers in the interventional group.

5.10.e. To determine the association between the level of self - esteem of the postnatal mothers in the interventional group and selected socio - demographic variables a Chi square analysis was done and it revealed that there was a significant association between the level of maternal self - esteem and age ($\chi 2=9.74$ $p=0.04*$), type of family($\chi 2=12.0$ $p=0.02*$), educational status of the mother, ($\chi 2=28.49$ $p=0.001***$), income of the family Rs / month ($\chi 2=16.48$ $p=0.01**$), i.e. the postnatal mothers who belonged to the younger age group, age group between 20 – 25 years, postnatal mothers who had higher education - professional education, postnatal mothers who earned a higher income - more than Rs 10,000 per month and those who hailed from a joint family had good self - esteem and these postnatal mothers were benefitted more.

There was no significant association between the level of self - esteem and other socio - demographic variables in the interventional group among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

5.10.f. On the other hand, when comparing the obstetrical variables, chi square analysis revealed that there was a significant association between the level of self - esteem of the postnatal mothers in the interventional group and stage III labour ($\chi 2=40.67$ $p=0.001***$), absence of congenital abnormalities in the child ($\chi 2=12.27$ $p=0.01*$), health status of the child ($\chi 2=18.94$ $p=0.001*$), of the obstetrical variables, i.e. the postnatal mothers who had shorter duration of 3rd stage of labour – less than 10 minutes, mother who delivered a child without congenital abnormalities and mothers who had a healthy child, had a good self - esteem among the postnatal mothers in the interventional group.

There was no significant association between the level of self - esteem and other obstetrical variables among the postnatal mothers admitted at Government Rajaji Hospital, Madurai in the interventional group.

Carrie Clarke also supported findings of this study and found that maternal depression, anxiety and health behaviour did not show any association with neonatal outcomes. There was a greater self - esteem among the mothers who delivered babies with higher birth weight, higher birth length in boys and girls, and higher maternal education. Maternal income showed a positive association with birth weight and gestational age, lower self - esteem leads to higher stress levels which reduces the growth of the baby.[72]

The findings were also consistent with the findings of Heather Lynn who revealed that mothers who exercised more and who were more active had higher energy levels towards their children. The exercise-energy had an effect directly over the mood and self - esteem of the postnatal mothers.[27]

Dias also has supported these findings, that there was a significant association between self-esteem and maternal age, mother's educational level, and their level of income. If these variables were higher their self-esteem also was higher among the pregnant women.[78]

Hence, Hypotheses H5 "There will be a significant association between the level of self - esteem and selected Socio - demographic, obstetrical variables among the postnatal mothers in the interventional group" was accepted.

The sixth objective of the study was to find out the association between the level of self - esteem and selected socio - demographic, obstetrical variables among postnatal mothers in the control group.

5.10.g. To seek the association between the level of maternal self - esteem of the postnatal mothers in the control group with selected socio - demographic variables a chi square analysis was done and the findings revealed that There was a significant association between the level of self - esteem and locality of residence ($\chi 2$=15.11p=0.01**), educational status ($\chi 2$=33.57 p=0.001***), work pattern ($\chi 2$=11.45 p=0.02*).

The postnatal mothers, whose residence area was from urban area, and postnatal mothers who had higher educational level - professional education, and mothers who did strenuous work or who were heavy workers had good self - esteem.

There was no significant association between the level of maternal self - esteem of the postnatal mothers in the control group and other selected socio - demographic variables.

5.10.h. Whereas, on the other hand, while seeking association between the level of maternal self - esteem and selected obstetrical variables in the control group a chi square analysis was done and the results revealed that, there was a significant association between the level of maternal self - esteem and IIIrd stage of labour ($\chi 2$=10.07 p=0.04*).

The postnatal mothers who had shorter duration of labour – 3rd stage less than 10 minutes had good self - esteem.

There was no significant association between the level of maternal self - esteem and the other selected obstetrical variables among the postnatal mothers admitted at Government Rajaji Hospital, Madurai, in the control group.

Hence, the stated Hypotheses H6 "There will be a significant association between the level of self - esteem and selected Socio - demographic, obstetrical variables among the postnatal mothers in the control group" was accepted.

The seventh objective of the study was to determine the relationship between the postnatal blues and self - esteem among the postnatal mothers.

5.11.a. In order to find out the relationship between the postnatal blues and maternal self - esteem of the interventional and the control group, Pearson correlation coefficient was calculated.

The findings in table 23, suggests that there was a negative correlation between postnatal blues and maternal self - esteem in the control group, i.e. when the postnatal blues of the postnatal mother increases their maternal self - esteem eventually decreases moderately.

5.11.b. Whereas, in the interventional group, there was a significant high negative correlation between postnatal blues and maternal self - esteem at $P < 0.01$ level, among the postnatal mothers admitted at Govt Rajaji Hospital, Madurai, i.e. when maternal self - esteem of the postnatal mother's increases their postnatal blues decreases and vice versa.

Murray L also supports this study finding, he has stated that there was a strong relation between maternal blues and self - esteem, postnatal depression and postnatal blues, stress and postnatal blues.[140]

This finding was also supported by a study done by Sowislo which revealed there was a strong relationship between self-esteem and postnatal blues, and no relationship between depression and self-esteem. He found that there was a negative correlation between self-esteem and blues affecting each other in similar ways.[86]

The finding was also supported by A M Wallace, D B Boyer, which revealed that there was a statistically significant inverse relationship between exercise and discomforts during pregnancy in the third trimester. Hence, there was a relation between exercise during pregnancy and a higher self-esteem, reduced discomfort.[131]

Hence, the stated Hypotheses H7 "There will be a significant relationship between the postnatal blues and self - esteem among the postnatal mothers" was accepted.

5.12. a. To find out the factors influencing the reduction of postnatal blues among the postnatal mothers in the interventional group was carried out by using Univariate and multivariate regression analysis.

The findings in table 24 of Univariate analysis identified that place of residence, education status of the postnatal mother, educational status of husband, type of family and duration of labour in stage I were the significant contributing factors for reducing postnatal blues among postnatal mothers in the interventional group.

Adjusted odds ratio using multivariate logistic regression also identified that educational status, educational status of husband, type of family and duration of labour in stage I were the significant contributing factors for reducing postnatal blues among postnatal mothers in the interventional group.

5.12. b. To find out the factors influencing increasing maternal self - esteem among the postnatal mothers in the interventional group was carried out by using Univariate and multivariate regression analysis.

The findings in table 25 of Univariate analysis identified that age, type of family, monthly income, duration of labour in stage III less than 10 minutes were the significant contributing factors for increasing self - esteem among postnatal mothers in the interventional group.

Adjusted odds ratio using multivariate logistic regression also identified that age, type of family, monthly income were the significant contributing factors for increasing self - esteem among postnatal mothers in the interventional group.

CHAPTER VI

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter is divided into four sections, and deals with the summary and recommendations. In the first two sections the summary of the study and conclusions are presented. In the last two sections the implications for nursing practice, nursing education, nursing research, nursing administration and the recommendations for the future research are discussed.

The purpose of this study was to evaluate the effectiveness of complementary and alternative therapies in terms of postnatal blues and maternal self – esteem among postnatal mothers admitted at Government Rajaji Hospital, Madurai.

6.1. a. Summary

Maternity blues or postnatal blues may be a normal psychological reaction to the major physiologic changes that occur after delivery particularly the hormonal imbalances after child birth. Postnatal blues is a serious affective disorder that arises within a week after child birth, one out of eight postnatal women may experience blues in their lifetime, it affects 11.5 million people every year, among them 28% go into postnatal depression and approximately 15% of the mother's commit suicide. Risk factors for blues symptoms include relationship difficulties, a history of depression or any psychiatric illness or psychological illness, during pregnancy, prenatal anxiety, a high level of stress, a low level of social support, poor marital relationship, and a low socio economic status. Assessment of the predisposing factors or the symptoms associated with depression is essential to find out the women at the earliest who are at risk for postnatal blues and low maternal self – esteem for early treatment and referral of the client. The mother should get more hours of rest, she

must use relaxation techniques and complementary therapy as much as possible, and she should talk to her partner, arrange some alternative and plan a day off completely from all the house hold routine. If the postnatal mother is breast-feeding then give her some time to learn and understand breast-feeding.

A person who is happy and well adjusted is always concerned about the happiness of others. Thus, when the mothers have adjusted to the pregnancy and child birth situation they also will contribute some positive benefit towards the welfare of the baby and their family members and tend to have good maternal self esteem. Nurses can intervene by means of complementary and alternate therapies to alter the physical discomfort and psychological disturbances, to bring back emotional stability and to adjust the postpartum period effectively by strengthening the postnatal mother's coping mechanisms, by which postnatal blues can be lowered and maternal self – esteem can be improved.

Hence, nurses essentially have to identify postnatal mothers with increased blue scores and decreased maternal self – esteem scores at the earliest and provide treatment services at the earliest there by reducing the magnitude of the postnatal blues which in turn reduces the morbidity and mortality of the postnatal women. This will aid ultimately in providing a healthier mother and baby to the society who are the future citizens of the country.

The purpose of the study was to determine the effectiveness of complementary and alternative therapies in terms of postnatal blues and maternal self – esteem among the postnatal mothers admitted at Government Rajaji Hospital, Madurai.

The objectives of the study were

1. To assess the posttest level of postnatal blues and self – esteem among the postnatal mothers in the interventional group and control group.
2. To evaluate the effectiveness of Complementary and alternative therapies in terms of postnatal blues and self – esteem among postnatal mothers between the interventional group and control group.
3. To find out the association between the level of postnatal blues of the postnatal mothers and selected socio - demographic variables, obstetrical variables in the interventional group.
4. To find out the association between the level of postnatal blues of the postnatal mothers and selected socio - demographic variables, obstetrical variables in the control group.
5. To find out the association between the level of self – esteem of the postnatal mothers and selected socio - demographic variables, obstetrical variables in the interventional group.
6. To find out the association between the level of self – esteem of the postnatal mothers and selected socio - demographic variables, obstetrical variables in the control group.
7. To determine the relationship between the postnatal blues and self – esteem among the postnatal mothers.

Based on the objectives the following hypotheses were set and were tested at 0.05 level of significance

1. The mean blues scores of the postnatal mothers who receive complementary alternative therapies will be significantly lower than the mean blue scores of the postnatal mothers who do not receive complementary and alternative therapies.
2. The mean self – esteem scores of the postnatal mothers who receive complementary alternative therapies will be significantly higher than the mean self – esteem scores of the postnatal mothers who do not receive complementary and alternative therapies.
3. There will be a significant association between the level of postnatal blues of the postnatal mothers and selected socio - demographic variables, obstetrical variables in the interventional group.
4. There will be a significant association between the level of postnatal blues of the postnatal mothers and selected socio - demographic variables, obstetrical variables in the control group.
5. There will be a significant association between the level of self – esteem of the postnatal mothers and selected socio - demographic variables, obstetrical variables in the interventional group
6. There will be a significant association between the level of self – esteem of the postnatal mothers and selected socio - demographic variables, obstetrical variables in the control group
7. There will be a significant relationship between the postnatal blues and self - esteem among the postnatal mothers.

The assumptions assumed in this study were

1. A large percentage of the postnatal mothers may experience varying level of postnatal blues.
2. Majority of the postnatal mothers who have postnatal blues may have low maternal self esteem
3. Complementary and alternative therapies given to the individuals may provide an opportunity for active learning among the participants which may prevent postnatal blues, and improve maternal self esteem.
4. The Nurses play an important role as a therapist and an educator to postnatal mothers.

A true experimental with a posttest only control group design was used in this study, the conceptual framework used in this study was based on Newman's Health Care System Model (1982). Newman sees human beings as persons exposed to stressors and this she identifies as intrapersonal, interpersonal and extra personal that have flexible lines of resistance. These lines of resistance help the mothers to defend against those stressors.

Based on power analysis, a sample of 300 postnatal mothers (150 for interventional group and 150 for control group) who were admitted at the Government Rajaji Hospital Madurai, were selected by simple random sampling (lot method).

Modified Kennerly blues assessment scale was prepared from Kennerly blues questionnaire. Few items were deleted and few items were added based on the literature review. It consisted of 30 items describing the postnatal mother's feelings when newly delivered. Out of the 30 items there were 15 positive items and 15 negative items. It consisted of a list of feelings or descriptions that newly delivered

mothers have used to describe how they are feeling, on that particular day by putting a tick mark in the appropriate box. The response was usually described as not there at all, seldom, often, and always. The total postnatal blue score was tabulated as no blues: 1 – 30, mild postnatal blues: 31 – 60, moderate postnatal blues: 61 – 90, severe postnatal blues: 91 – 120.

For assessing maternal self – esteem, maternal self – esteem scale was used which was prepared by the investigator by conducting an extensive review of literature from various sources. Based on the literature review and from the views of delivered mothers the items were classified under the mentioned aspects such as feelings concerning pregnancy, labor, and delivery (item numbers: 1, 2, 3), ability and preparedness for mothering (item numbers 4, 5, 6, 7, 8, 9, 10, 11) acceptance of baby (item numbers : 12, 13, 14), expected relationship with baby (item numbers : 15, 16, 17) parental acceptance (item numbers: 18, 19, 20, 21), body image and health (item numbers: 22, 23, 24, 25). It consisted of 25 items. Out of the 25 items there were 13 positive items and 12 negative items. They were usually described as strongly agree, agree, disagree, and strongly disagree.

The total maternal self – esteem was tabulated as low self - esteem: 1 – 50, moderate self - esteem: 51 - 75, and good self – esteem : 76 – 100.

The intervention given for the interventional group was complementary and alternative therapies which is a set of interventions which is given in such a way to adopt or enlighten the mothers on postnatal blues and maternal self esteem. The intervention package was prepared after thorough reviewing of literature and from expert's suggestion and opinion. The package consisted of prophylactic information regarding postnatal blues, postnatal exercises, pranayama, and guided imagery.

The tool along with intervention package was given for validity to ten of the experts and the tool was valid and reliable based on cronbach's alpha and test retest method.

Based on the objectives and hypotheses the data were analyzed by using descriptive and inferential statistics

6.1. b. Summary of the findings (Major findings of the study) were

- The postnatal mothers in the interventional group and the control group were homogenous in nature as there was no difference between the interventional group and control group revealed chi square analysis.
- The level of postnatal blues was lower in the interventional group than in the Control group. The $\chi 2=75.6$ showed a difference in the level of postnatal blues between the interventional and the control group which portrayed that Complementary and alternative therapies was the reason for the differences between the groups and was effective at p=0.001***level.
- The posttest mean postnatal blue scores was 45.37 with a standard deviation of 22.23 in the interventional group, whereas the posttest mean postnatal blue scores in the control group was 70.34 with a standard deviation of 22.15. The independent "t" 9.74, was greater than the table value which was significant at 0.001 level.
- The mean posttest question wise scores of postnatal blues among postnatal mothers in the interventional group was lesser than the mean posttest question wise scores of postnatal blues among postnatal mothers in the control group. This shows that there was a statistically significant difference in the question wise postnatal blues scores between the interventional and the control group.

- The level of maternal self – esteem was higher in the interventional group than in the Control group. The $\chi 2=73.6$ showed a difference in the level of maternal self – esteem between the interventional and the control group which also depicts that Complementary and alternative therapies was the reason for the differences between the groups and was effective at p=0.001***level.
- The posttest mean maternal self – esteem scores was 76.05 with a standard deviation of 16.83 in the interventional group, where as the posttest mean maternal self – esteem scores in the control group was 750.19 with a standard deviation of 15.38. The calculated Independent "t" was 13.89 and it was greater than the table value which was significant at 0.001 level.
- The mean posttest question wise scores of maternal self – esteem among postnatal mothers in the interventional group was greater than the mean posttest question wise scores of maternal self – esteem among postnatal mothers in the control group. This shows that there was a statistically significant difference in the question wise postnatal maternal self – esteem scores between the interventional and the control group.
- The Complementary and alternative therapy intervention was found to be effective in reducing the postnatal blues and in improving the maternal self – esteem during the immediate postnatal period.
- On an average, postnatal mother's postnatal blues was decreased by 20.8% in the interventional group when compared with the postnatal mothers in the control group.

- On an average, the postnatal mother's self – esteem was increased by 25.9% in the interventional group when compared with the postnatal mothers in the control group.
- There was a significant association between the level of postnatal blues and locality of residence ($\chi 2=19.1$ p=0.004**), level of education of the mother ($\chi 2=55.3$ p=0.001***), educational level of husband ($\chi 2=51.1$ p=0.001***), type of family ($\chi 2=13.5$ p=0.04*) in the interventional group.
- There was a significant association between the level of postnatal blues and age ($\chi 2=5.84$p=0.05*), work pattern ($\chi 2=12.34$ p=0.05*) in the control group.
- There was a significant association between the level of postnatal blues and antenatal OPD registration ($\chi 2=10.39$ p=0.01**), shorter duration of stage I, ($\chi 2=13.92$ p=0.03*), stage II ($\chi 2=12.97$ p=0.04*), and stage III ($\chi 2=26.66$ p=0.01**) mothers were benefitted more in the interventional group.
- There was a significant association between the level of postnatal blues and presence congenital abnormalities of the child ($\chi 2=18.78$ p=0.01**), health status of the child ($\chi 2=8.98$ p=0.03*), in the control group**.**
- There was a significant association between the level of maternal self – esteem and age ($\chi 2=9.74$ p=0.04*), type of family ($\chi 2=12.0$ p=0.02*), educational status of the mother,($\chi 2=28.49$ p=0.001***), income of the family in Rs per month ($\chi 2=16.48$ p=0.01**) in the interventional group.

- There was a significant association between the level of self – esteem and locality of residence ($\chi 2=15.11 p=0.01^{**}$), level of educational of the mother ($\chi 2=33.57$ $p=0.001^{***}$), work pattern ($\chi 2=11.45$ $p=0.02^{*}$) in the control group.
- There was a significant association between the level of self – esteem of the postnatal mothers and stage III labour ($\chi 2=40.67$ $p=0.001^{***}$), absence of congenital abnormalities of the child ($\chi 2=12.27$ $p=0.01^{*}$), health status of the child ($\chi 2=18.94$ $p=0.001^{*}$), of the obstetrical variables in the interventional group.
- There was a significant association between the level of maternal self – esteem and IIIrd stage of labour ($\chi 2=10.07$ $p=0.04^{*}$) in the control group.
- There was a negative correlation between postnatal blues and maternal self – esteem among postnatal mothers in the control group.
- There was a negative correlation between postnatal blues and maternal self – esteem among postnatal mothers in the interventional group.
- Place of residence, education status of the postnatal mother, educational status of husband, type of family and duration of labour in stage I were the significant contributing factors for reducing postnatal blues among postnatal mothers in the interventional group.
- Age, type of family, monthly income, duration of labour in stage III were the significant contributing factors for improving self – esteem among postnatal mothers in the interventional group.

6.2. Limitations

The limitations of the study were as follows;

- The subjects were selected from a selected hospital at Madurai, which imposes limits on generalization.
- The assessment of postnatal blues and maternal self – esteem was based on self report from the postnatal mothers; that could not be counter checked.
- During the course of study 8(5.33%) of the postnatal mothers in the interventional group and 5(3.3%) of the postnatal mothers in the control group got discharged before 5th postnatal day. 7(4.6) of the postnatal mothers in the interventional group and 3(2%) of the postnatal mothers in the control group withdrew in between the course of study and this took extra time for the investigator to complete the data collection.

6.3. Impact of the study findings

The postpartum period is a high-risk time for the least (the blues) and most severe (psychosis) mental disorders. Most postpartum psychotic disorders occur in the first month postpartum; nonpsychotic major depressions may occur anytime in the postpartum period.

Everyone should understand that blues are normal. The coping strategies for postnatal blues are, the mother should get adequate rest and sleep, she must use relaxation techniques as much as possible, she should ventilate to her partner about her emotional reactions and lability, and she should be completely off from all her routine work for a day in a week and arrange an alternative for it.

Blues and self-esteem are intertwined and contribute to negative mood. Research has shown how self-esteem influences postnatal blues, and few studies have

suggested that blues works negatively on the postnatal mother to decrease their self-esteem. A clear understanding of this picture how one affects the other is essential to treat blues and other co morbid conditions effectively.

The findings of this study helped in preventing the risk of postnatal blues among postnatal mother and it helped to improve the maternal self – esteem as the maternal adjustment of postnatal mothers would be established which inturn reduces the risk of developing postpartum depression.

Place of residence, education status, educational status of husband, type of family and duration of labour in stage I were the significant contributing factors for reducing postnatal blues among postnatal mothers. whereas Age, type of family, monthly income, duration of labour in stage III were the significant contributing factors for improving self – esteem among postnatal mothers in the interventional group. Hence, when these aspects are considered by the nurses in the obstetrics department, postnatal blues can be reduced and maternal self – esteem could be improved.

On an average, postnatal blues was reduced by 20.8% and maternal self – esteem was improved by 25.9% among the postnatal mothers in the interventional group when compared with the control group.

Routine utilization of the Kennerly blues scale and maternal self – esteem scale could be incorporated by the Nurse administrators in the obstetrics department for the future postnatal mothers to assess their postnatal blues and self – esteem thereby preventing postnatal blues which leads to primary prevention, and if needed to treat or refer appropriately thereby initiating secondary prevention and tertiary prevention respectively.

6.4. Implications for Nursing

6.4. a. Nursing Practice

- Nurses play a vital role in helping postnatal mothers to adjust to changes in body function, appearance, and to improve their self – esteem by inculcating the concepts of teaching during perinatal period.
- Nurses can intervene to alter the physical discomfort and psychological isolation by which postnatal blues can be lowered naturally. When physical discomfort is reduced it reduces the postnatal blues which inturn improves the self – esteem respectively.
- Practising nurses need to identify those antenatal mothers who are at greater risk to develop baby blues during postnatal period (Age more than 25 years, widowed mother, collegiate education, employed mother, less earning mothers, and mother without formal education). The mothers who pose a greater risk to develop Baby Blues due to intranatal causes (male babies, normal with episiotomy, birth weight 2–3 kgs, and presence of congenital abnormalities) require a greater reinforcement and increased sessions of complementary alternative therapies by practising nurses.
- Nurses essentially have to identify postnatal mothers with heightened blue scores and lower self – esteem scores at the earliest and institute remedial services at the earliest.
- The postnatal mothers with no support system are to be periodically assessed for postnatal blues, maternal self – esteem and they need to be given additional information on acquiring support systems.

6.4. b. Nursing Education

- ✓ There should be greater emphasis in the nursing curriculum of maternity nursing, and mental health nursing for ten hours, about postnatal blues, maternal self – esteem and its remedial measures.
- ✓ Student nurses must be motivated to prepare and use tools on assessing postnatal blues and maternal self esteem.
- ✓ Student nurses should incorporate the importance of practical training of complementary alternative therapies in their individual and mass health education program.

6.4. c. Nursing Research

- ❖ It is necessary to undertake more research in the field of complementary and alternative therapies and women's mental health, to achieve holistic care to clients in the perinatal period.
- ❖ One of the aims of nursing research is to expand and broaden the scope of nursing. Findings of this study will provide a base line data regarding postnatal blues and maternal self esteem, and the implication of complementary and alternative therapies. Hence, it can be used for further studies in this area.
- ❖ Nurse researchers should challenge to perform scientific work and take part in assessment, application, and evaluation of maternal adjustment for clients with heightened postnatal blues and low maternal self esteem.

6.4. d. Nursing Administration

- In-service education on use of complementary and alternative therapies should be conducted periodically in the clinical areas. Moreover the Nurse administrators should allot sufficient funds in the budget for these programs.
- Nurse administrators can prepare skilled nurses who can spend time with postnatal mothers to talk through some of the more troubling aspects, which inturn will reduce the postnatal blues and improve the maternal self - esteem.
- Nurse administrators can plan various health education programmes in the hospital and community to place emphasis on psychosocial adjustment of postnatal mothers.
- Findings of the study could be utilized as a basis for the nurse administrators in identifying potentially high risk postnatal mothers for Baby Blues and interviewing in their treatment before they reach a poor prognostic state.
- Nurse administrator can impose the routine utilization of the Kennerly Blues questionnaire and maternal self – esteem scale in the postnatal wards regularly.

6.5. CONCLUSION

- Complementary and alternative therapies were found to be effective in reducing the postnatal blues and in improving the maternal self – esteem among postnatal mothers in the immediate postnatal period.
- None of the mothers reported adverse reactions to Complementary and alternative therapies.
- Complementary and alternative therapies were accepted holistically, hence, along with the medical treatment, complementary and alternative therapies could be added into the treatment regiment which addresses the feasibility of the intervention in Indian scenario.

6.6. Recommendations

- A similar study with longer duration can be conducted to assess the long term effect of complementary and alternative therapies.
- A similar study can be carried out among multiparous postnatal mothers, and in various other settings.
- A comparative study can be done to assess the perceptions of maternal adjustment in terms of postnatal blues, maternal self-esteem by the postnatal mother, their relatives and health care personnel.
- A longitudinal study can be undertaken to assess for postnatal depression among postnatal mothers with heightened blue scores during the first week of postnatal period.
- A similar study among the postnatal mothers whose babies are cared in newborn nursery can be carried out.
- Qualitative studies to identify the postnatal mothers feeling regarding labour, delivery and postpartum period, the problems they came across and how they coped up with those problems can be carried out.
- Studies using different intervention strategies (discharge education program, Kyuki-chouketsu-in herbal therapy, mirror tracing, hormonal therapy, psychosocial intervention on psychosocial adjustment for men and women,) to reduce postnatal blues and improve maternal self – esteem among postnatal mothers can be undertaken.
- An estimation of the reproductive hormone levels for postnatal mothers with higher blue scores and lower maternal self – esteem can be performed.

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Appendix - I. Letters Seeking Permission to conduct the study

From
Mrs.S.Rajamani M.Sc (N),
Nursing Tutor Gr: II,
College of Nursing,
Madurai Medical College,
Madurai: 625020.

To
The Director of Medical Education,
Office of the Directorate of Medical education,
Kilpauk, Chennai: 600010.

Through
The Proper Channel.

Respected Sir

Sub: Permission to register Ph.D Nursing (part time) at Dr.M.G.R. Medical University Chennai, under CSI Jeyaraj Annapackiam College of Nursing, Madurai regarding.

I wish to register for my Ph.D Nursing (part time) at CSI Jeyaraj Annapackiam College of Nursing; Madurai affiliated to "The Tamilnadu Dr.M.G.R. Medical University" Chennai. I have already given a request through the proper channel to the directorate and obtained permission to apply for the same previously **(84609/N2/2008 dt 24.11.08).** Hence I request you to kindly grant me permission to register for my Ph.D in nursing (part time). Herewith I have enclosed the copies of permission letters obtained previously along with this request.

Thanking you in anticipation,

Station: Your's faithfully

Date:

S.Rajamani.

Enclosures
1 Permission letter from the Directorate of Medical Education (84609/N2/2008 dt 24.11.08)
2 Permission from the Dean Madurai Medical College, Madurai. (2450/E2/1/09dt 24.02.09)

From

Mrs.S.Rajamani M.Sc (N),
Nursing Tutor Gr: II,
College of Nursing,
Madurai Medical College,
Madurai: 625020.

To

The Dean,
Madurai Medical College,
Madurai: 625020.

Through

The Proper channel.

Respected Sir / Madam

Sub: Permission to register Ph.D Nursing (part time) and to forward of application to the Directorate of Medical Education, Chennai, regarding.

I wish to register for my Ph.D Nursing (part time) at CSI Jeyaraj Annapackiam College of Nursing; Madurai affiliated to "The Tamilnadu Dr.M.G.R. Medical University" Chennai. I have already given a request through the proper channel to the directorate and obtained permission to apply for the same previously **(84609/N2/2008 dt 24.11.08).** Hence I request you to kindly grant me permission to register for my Ph.D in nursing (part time) and to forward my application to the Directorate of Medical Education, Chennai. Herewith I have enclosed the copies of permission letters obtained previously along with this request.

Thanking you in anticipation,

Station: Your's faithfully

Date:

S.Rajamani.

Enclosures
1 Permission letter from the Directorate of Medical Education (84609/N2/2008 dt 24.11.08)
2 Permission from the Dean Madurai Medical College, Madurai. (2450/E2/1/09dt 24.02.09)

From

Mrs.S.Rajamani, M.Sc (N),
Nursing Tutor Gr: II, College of Nursing,
Madurai Medical College,
Madurai: 625020.

To

The Dean,
Government Rajaji Hospital,
Madurai: 625020.

Through

The Proper channel.

Respected Sir

Sub: Permission to do Ph.D research study at Government Rajaji Hospital, Madurai regarding.

I wish to do my Ph.D Nursing (part time) research study at Government Rajaji Hospital, Madurai. Under CSI Jeyaraj Annapackiam College of Nursing; Madurai affiliated to "The Tamilnadu Dr. M.G.R. Medical University" Chennai. I have already given a request through the proper channel to the directorate and obtained permission to apply for the same previously **(84609/N2/2008 dt 24.11.08)** Hence I request you to kindly grant me permission to do my research study of my Ph.D in nursing (part time) at Government Rajaji Hospital, Madurai. I assure you that I will abide by the institutional ethical committee rules and regulations. Herewith I have enclosed the copies of permission letters obtained previously along with this request.

Thanking you in anticipation,

Station: Your's faithfully

Date: S.Rajamani.

Enclosures

1 Permission letter from the Directorate of Medical Education (84609/N2/2008 dt 24.11.08)
2 Permission from the Dean Madurai Medical College, Madurai. (2450/E2/1/09dt 24.02.09)

From

Mrs.S.Rajamani M.Sc (N),
Nursing Tutor Gr: II, College of Nursing,
Madurai Medical College,
Madurai: 625020.

To
The Head of the Department,
Dept of Obstetrics and Gynecology
Government Rajaji Hospital,
Madurai: 625020.

Through
The Proper channel.

Respected Sir

Sub: Permission to do Ph.D research study in the Dept of Obstetrics and Gynecology at the Government Rajaji Hospital, Madurai regarding.

I wish to do my Ph.D Nursing (part time) research study in the Dept of Obstetrics and Gynecology at Government Rajaji Hospital, Madurai. Under CSI Jeyaraj Annapackiam College of Nursing; Madurai affiliated to "The Tamilnadu Dr.M.G.R. Medical University" Chennai. I have already given a request through the proper channel to the directorate and obtained permission to apply for the same previously **(84609/N2/2008 dt 24.11.08)** Hence I request you to kindly grant me permission to do my research study of my Ph.D in nursing (part time) in the Dept of Obstetrics and Gynecology at Government Rajaji Hospital, Madurai. I assure you that I will abide by the institutional ethical committee rules and regulations. Herewith I have enclosed the copies of permission letters obtained previously along with this request.

Thanking you in anticipation,

Station: Your's faithfully

Date: S.Rajamani.

Enclosures

1 Permission letter from the Directorate of Medical Education (84609/N2/2008 dt 24.11.08)
2 Permission from the Dean Madurai Medical College, Madurai. (2450/E2/1/09dt 24.02.09)
3. Permission from the Dean Government Rajaji Hospital, Madurai.

From
Mrs.S.Rajamani M.Sc (N),
Nursing Tutor Gr: II, College of Nursing,
Madurai Medical College,
Madurai: 625020.

To
The Chairman,
Ethical clearance committee,
Government Rajaji Hospital,
Madurai: 625020.

Through
The Proper channel.

Respected Sir

Sub: Ethical committee clearance and permission to do Ph.D research study at Government Rajaji Hospital, Madurai, request regarding.

I wish to do my Ph.D Nursing (part time) research study at Government Rajaji Hospital, Madurai. Under CSI Jeyaraj Annapackiam College of Nursing; Madurai affiliated to "The Tamilnadu Dr. M.G.R. Medical University" Chennai. I have already given a request through the proper channel to the directorate and obtained permission to apply for the same previously **(84609/N2/2008 dt 24.11.08).** Hence I request you to kindly grant me permission to do my research study of my Ph.D in nursing (part time) at Government Rajaji Hospital, Madurai. I assure you that I will abide by the institutional ethical committee rules and regulations. Herewith I have enclosed the copies of permission letters obtained previously and my research topic proposal along with this request.

Thanking you in anticipation,

Station: Madurai Your's faithfully

Date: S.Rajamani.

Enclosures

1 Permission letter from the Directorate of Medical Education (84609/N2/2008 dt 24.11.08)
2 Permission from the Dean Madurai Medical College, Madurai. (2450/E2/1/09dt 24.02.09)

From

Mrs.S.Rajamani M.Sc (N),
Nursing Tutor Gr: II, College of Nursing,
Madurai Medical College,
Madurai: 625020.

To
Dr. S. Gowrie M.D., D.G.O., FICS,
Retd. HOD / Professor,
Sri Gowrie Health Care Center,
95- A. P&T Nagar Road,
Thiruvalluvar Colony,
Madurai: 625017

Respected Madam

Sub: Permission to do Ph.D Research Pilot study data collection request regarding…

I am doing my Ph.D Nursing (part time) at CSI College of Nursing, under "The Tamilnadu Dr. M.G.R. Medical University" Chennai. My Research study topic is A Study to evaluate the Effectiveness of Complementary and Alternative Therapies in terms of Postnatal Blues and self esteem among postnatal mothers admitted at Government Rajaji Hospital, Madurai. I am interested to do my pilot study data collection at your esteemed institution. Hence I request you to kindly grant me permission to do my pilot study data collection among 60 postnatal mothers. I assure you that I will abide by the institutional rules and policies. Kindly do the needful madam

Thanking you in anticipation,

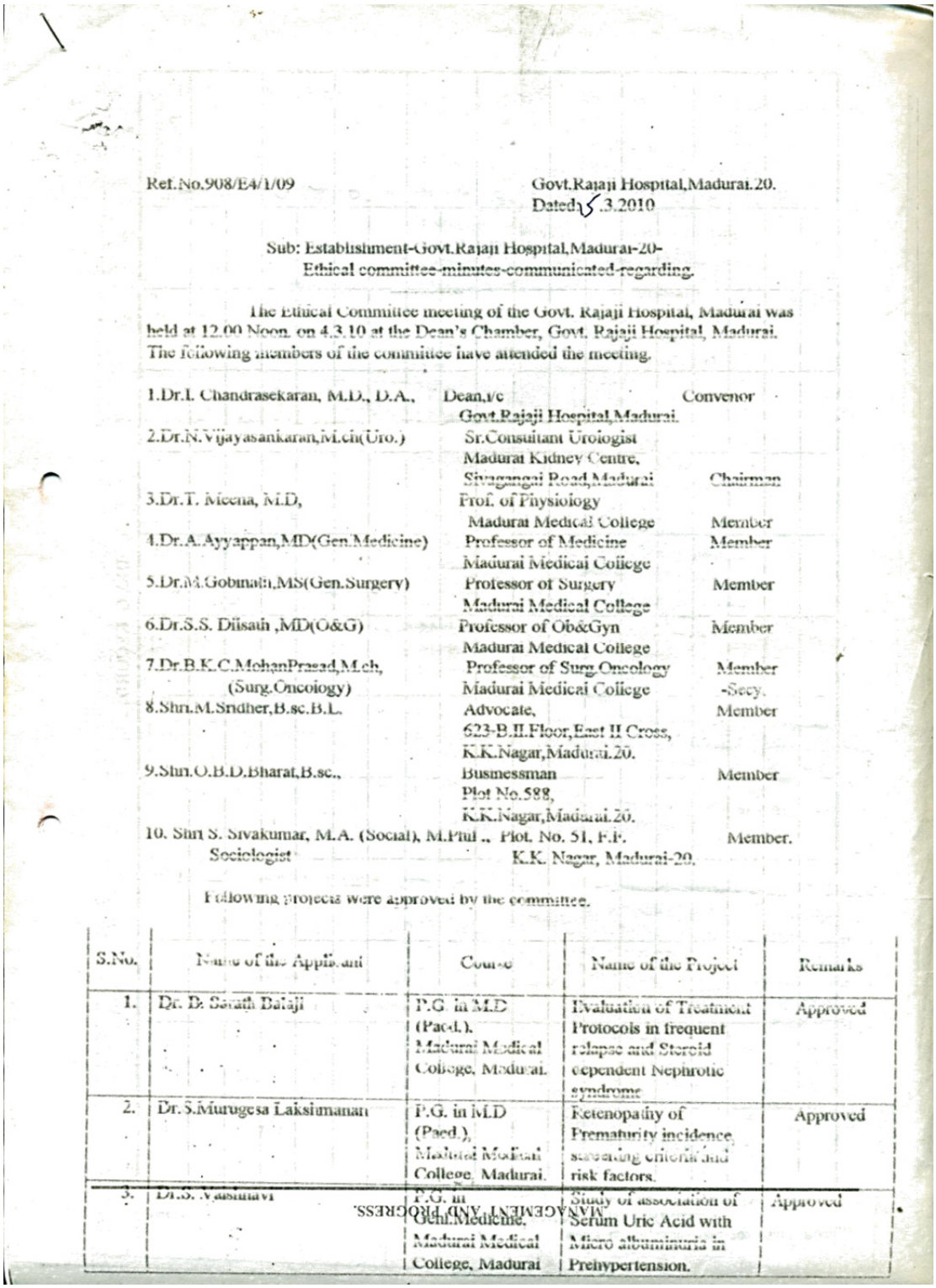
Station: Madurai Your's faithfully

Date: S.Rajamani.

Enclosures

1 Permission letter from the Directorate of Medical Education (84609/N2/2008 dt 24.11.08)
2 Permission from the Dean Madurai Medical College, Madurai. (2450/E2/1/09dt 24.02.09)
3. Permission from the Dean Government Rajaji Hospital, Madurai.

Appendix - II. Letters Granting Permission to conduct the study



Ref.No.908/E4/1/09

Govt.Rajaji Hospital,Madurai.20.
Dated 15.3.2010

Sub: Establishment-Govt.Rajaji Hospital,Madurai-20-
Ethical committee-minutes-communicated-regarding.

The Ethical Committee meeting of the Govt. Rajaji Hospital, Madurai was held at 12.00 Noon on 4.3.10 at the Dean's Chamber, Govt. Rajaji Hospital, Madurai. The following members of the committee have attended the meeting.

1.Dr.I. Chandrasekaran, M.D., D.A.,	Dean,I/c Govt.Rajaji Hospital,Madurai.	Convenor
2.Dr.N.Vijayasankaran,M.ch(Uro.)	Sr.Consultant Urologist Madurai Kidney Centre, Sivagangai Road,Madurai	Chairman
3.Dr.T. Meena, M.D,	Prof. of Physiology Madurai Medical College	Member
4.Dr.A.Ayyappan,MD(Gen.Medicine)	Professor of Medicine Madurai Medical College	Member
5.Dr.M.Gobinath,MS(Gen.Surgery)	Professor of Surgery Madurai Medical College	Member
6.Dr.S.S. Dilsath ,MD(O&G)	Professor of Ob&Gyn Madurai Medical College	Member
7.Dr.B.K.C.MohanPraead,M.ch, (Surg.Oncology)	Professor of Surg.Oncology Madurai Medical College	Member -Secy.
8.Shri.M.Sridher,B.sc.B.L.	Advocate, 623-B.II.Floor,East II Cross, K.K.Nagar,Madurai.20.	Member
9.Shri.O.B.D.Bharat,B.sc.,	Busmessman Plot No.588, K.K.Nagar,Madurai.20.	Member
10. Shri S. Sivakumar, M.A. (Social), M.Phil ., Sociologist	Plot. No. 51, F.F. K.K. Nagar, Madurai-20.	Member.

Following projects were approved by the committee.

S.No.	Name of the Applicant	Course	Name of the Project	Remarks
1.	Dr. D. Sarath Balaji	P.G. in M.D (Paed.), Madurai Medical College, Madurai.	Evaluation of Treatment Protocols in frequent relapse and Steroid dependent Nephrotic syndrome	Approved
2.	Dr. S.Murugesa Laksimanan	P.G. in M.D (Paed.), Madurai Medical College, Madurai.	Retenopathy of Prematurity incidence, screening criteria and risk factors.	Approved
3.	Dr.S. Vasimavi	P.G. in Gen.Medicine, Madurai Medical College, Madurai	Study of association of Serum Uric Acid with Micro albuminuria in Prehypertension.	Approved

13.	Mrs. S. Rajamani	Nursing Tutor, Madurai Medical College, Madurai.	Effect of complemantary and alternative therapies in terms of Post natal Blues and self esteem among post natal mothers.	Approved

Please note that the investigator should adhere the following: She/He should get a detailed informed consent from the patients/participants and maintain Confidentially.

1. She/He should carry out the work without detrimental to regular activities as well as without extra expenditure to the institution to Government.
2. She/He should inform the institution Ethical Committee in case of any change of study procedure site and investigation or guide.
3. She/He should not deviate for the area of the work for which applied for Ethical clearance.

She/He should inform the IEC immediately, in case of any adverse events pr Serious adverse reactions.

4. She/he should abide to the rules and regulations of the institution.
5. She/He should complete the work within the specific period and apply for if any Extension of time is required She should apply for permission again and do the work.
6. She/He should submit the summary of the work to the Ethical Committee on Completion of the work.
7. She/He should not claim any funds from the institution while doing the work or on completion.
8. She/He should understand that the members of IEC have the right to monitor the work with prior intimation

15/3/16

DEAN.i/c.

15/3/16

To
All the above members and Head of the Departments concerned.
All the Applicants.

Proceedings of the Dean i/c, Madurai Medical College, Madurai-20.

Present: Dr.M.Shanthi, MD.,

K.Dis.No.2450/E2/1/09 Dated: 24.2.09.

Sub: Nursing Establishment - Tmt.S.Rajamani, Nursing Tutor Grade II, College of Nursing, Madurai Medical College, Madurai - permission - to do Ph.D in Nursing, (Part time) - granted - orders issued - Regarding.

Ref: 1. G.O.No.328/P&AR Dept) dt.9.4.83.

2. Application, dt.19.2.09.

-o-o-o-

As per Government order cited, Tmt.S.Rajamani, Nursing Tutor grade II, College of Nursing, Madurai Medical College, Madurai is is permitted to do Ph.D in Nursing (part time) at C.S.I. Jayaraj Annapackiam College of Nursing. Madurai Under The Tamilnadu Dr.M.G.R.Medical University, Chennai. And also she is instructed that the regular work will not be affected during the course of her studies routein government.

25.2.09

Dean i/c.

To

Tmt.S.Rajamani,
Nursing Tutor Gr.II,
College of Nursing,
Madurai Medical College,
Madurai - through principal i/c
Colleges of Nursing, Madurai Medical College, Madurai.20.

Spare-1

rs.24/2.

ஒ.மு. எண். 84609/செ2/2008

மருத்துவக் கல்வி இயக்குநர் அலுவலகம்,
கீழ்ப்பாக்கம், சென்னை – 10
நாள்: 24 .11.2008

19652

பொருள் – செவிலியர் நிர்வாகம் – திருமதி எஸ். ராஜாமணி, செவிலியர் போதகர் தரம் 2, மதுரை மருத்துவக் கல்லூரி, மதுரை – அஞ்சல் வழி கல்வி பயில அனுமதி வேண்டல் – தொடர்பாக.

பார்வை – முதல்வர், மதுரை மருத்துவக் கல்லூரி, மதுரை அவர்களின் கடித ந.க. எண் 15780/நி2/1/2008 நாள் 26.9.2008

பார்வையில் கண்டுள்ள கடிதத்தின் மீது முதல்வரின் கவனம் ஈர்க்கப்படுகிறது. அரசாணை எண். 328/பணியாளர் துறை நாள் 9.4.1983ன் படி திருமதி எஸ். ராஜாமணி, செவிலியர் போதகர் தரம் 2, மதுரை மருத்துவக் கல்லூரி, மதுரை அவர்களுக்கு அஞ்சல் வழியாக கல்வி பயில்வதற்கு தங்கள் நிலையிலேயே அனுமதி வழங்குமாறு முதல்வர் கேட்டுக் கொள்ளப்படுகிறார்.

Ph.D பதிவு செய்ய முறைப்படி அதற்குரிய விண்ணப்பத்தினை பூர்த்தி செய்து மேல் நடவடிக்கைக்காக இவ்வியக்குநர் அலுவலகத்திற்கு அனுப்பி வைக்கும்படி அறிவுறுத்தப்படுகிறார்.

பு. சரோஜினி
மருத்துவக் கல்வி இயக்குநருக்காக

உண்மை நகல் / ஆணைப்படி / அனுப்பப்படுகிறது

அலுவலக கண்காணிப்பாளர்

பெறுநர்
முதல்வர்
மதுரை மருத்துவக் கல்லூரி, மதுரை

MADURAI MEDICAL COLLEGE
DESPATCHED
Date 28/11/08

L. Dis. No. 7496/N2/2010

Directorate of Medical Education,
Kilpuck, Chennai – 600 010,
Date:19 .03.2010.

22 MAR 2010

Sub: Nursing Establishment – Tmt. S. Rajamani, Nursing Tutor Grade II, Madurai Medical College, Madurai – permission to register for Ph. D. Nursing (Part time) – issued.

Ref: Letter Ref. No. 1131/E2/1/2010 Dt:27.01.2010 of the Dean, Madurai Medical College, Madurai.

* * * *

The Ph.D. Provisional Registration application form in respect of Tmt. S. Rajamani, Nursing Tutor Grade II, Madurai Medical College, Madurai received in letter cited is returned here with duly signed by the Directorate of Medical Education.

S. VINAYAGAM
Director of Medical Education

True copy / forwarded / by order

Office Superintendent

To

The Dean,
Madurai Medical College, Madurai (We)

Copy to

Tmt. S. Rajamani,
Nursing Tutor Grade II
Madurai Medical College, Madurai

L.Dis.M. 1131/E2/1/10 Dt. 23/3/10

Forwarded

To,
Tmt. S. Rajamani
N. Tutor II
The Principal, CON
MMCH

Dr. S.GOWRIE M.D., D.G.O., FICS
(Retd. HOD/Professor
OBS & GYN Dept., Madurai Medical College.)

SRI GOWRI HEALTH CARE CENTER
Speciality Center For Health Care
(MATERNITY, INFERTILITY, SURGICAL, ONCOLOGY, LAPAROSCOPY & PAEDIATRIC SERVICES)

Date :

SRI GOWRI HEALTH CARE CENTRE
95-A, P & T NAGAR ROAD,
THIRUVALLUVAR COLONY,
MADURAI - 625 017

With your reference letter, regarding permission to do your pilot study on "Effect of Complementary and Alternative Therapies in terms of postnatal Blues and Self-esteem among postnatal mothers" you are here by permitted to do your pilot study in our institution with best regards.

Dr. S. GOWRI, MD.,DGO.,FICS.,FICOG
(Retd.HOD/Professor O&G Dept, Madurai Medical College)
Obstetrician & Gynaecologist
Reg.No.21324
Sri Gowri Health Care Center
95-A, Thiruvalluvar Colony
P & T Nagar Road, Madurai - 625 017

95-A, Old Natham Road, Thiruvalluvar Colony, P & T Nagar Road, Madurai - 625 017.Ph : 0452-2640657, Cell: 82200 15567, 75983 17916-

Appendix - III. Letter requesting suggestion for establishing content validity

From

S. Rajamani , M.Sc (N),
No: A 6, TNHB Quarters,
Lady Doak College Road,
Chinna Chokkikulam,
Madurai: 625002.

To

Respected Sir / Madam

Subject: **Letter requesting opinion and suggestions from experts For establishing content validity of the tool.**

I am a Ph.D Nursing student doing my Ph.D in the Tamil Nadu Dr. M.G.R. Medical University, Chennai, under the Guidance of Dr. Rajkumar. M.D. Professor,& H.O.D., Community Medicine, Meenakshi Medical College and Academy of Higher Education and Research, Kancheepuram, and Co guidance of Mrs. Sumithra Principal, J.J. College of Nursing, Pudukottai. As part of my curriculum I am doing a research study on the topic mentioned below.

Topic: "A study to evaluate the effectiveness of Complementary and alternative therapies in terms of postnatal blues and self esteem among the postnatal mothers admitted at Government Rajaji Hospital, Madurai"

May I kindly request you to kindly go through the tool and complementary and alternative therapy package and validate the contents of the Standardized tool. Please give your valuable suggestions and expert opinion for modifying the tool.

Thanking you in Anticipation

Place: **Your's sincerely**

Date: **S. Rajamani**

Appendix - IV. Tool Validity Certificate

This is to certify that the tool and the complementary and alternative therapies package to be used by **Mrs. SHANMUGAM .RAJAMANI,** Ph.D Scholar of the Tamil Nadu Dr. M.G.R. Medical University, Chennai, under C.S.I. Jeyaraj Annapackiam College of Nursing, Madurai, has been validated by me the undersigned.

I have gone through the tool for construct, content and criterion validity. I certify that this tool can be used for above mentioned study.The suggestions and modifications given by me will be incorporated by the investigator in collaboration with her guide.

Name : **Signature**

Designation :

Date :

Place : **Seal**

Appendix - V. List of Experts

1. **Prof. Dr. Rajalakshmi, Ph.D,**
   Professor & Research Guide,
   CSI, Jayaraj Annapackiam College of Nursing,
   Pasualai, Madurai.

2. **Dr. K. Menaka, Ph.D,**
   Principal,
   Govt College of Nursing,
   Govt Salem Mohan Kumaramangalam Medical College,
   Salem.

3. **Dr. Baby Nayak, Ph.D,**
   Professor and HOD,
   College of Nursing,
   Manipal Academy of Higher Education,
   Manipal.

4. **Dr. Nalini Jayavanth Shantha, Ph.D,**
   Principal,
   Sacred Heart Nursing College,
   Madurai.

5. **Dr. P. Mangala Gowri, Ph.D,**
   Principal,
   Saveetha College of Nursing,
   Chennai.

6. **Dr. S. Vijayalakshmi, Ph.D,**
   Principal,
   Vignesh Nursing College,
   Kizhanaikkarai,
   Thiruvannamalai.

7. **Dr. Mrs. V. Kumari, Ph.D,**
   Principal,
   Govt College of Nursing,
   Govt Salem Mohan Kumaramangalam Medical College,
   Salem.

8. **Dr. Irene lite Ph.D,**
   Principal,
   Dr.G. Sakunthala College of Nursing,
   Trichy.

9. **Dr. Elaine Victoria, Ph.D,**
   Reader,
   Sri Ramachandra College of Nursing,
   Sri Ramachandra University, Chennai.

10. **Dr. Ramachandra, Ph.D,**
    Principal,
    College of Nursing,
    NIMHANS,
    Bangalore.

11. **Dr. Santhi Appavu, Ph.D,**
    Principal,
    Christian College of Nursing,
    Neyyoor,
    Kanyakumari.

12. **Dr. A. Reena Evancy, Ph.D,**
    Principal,
    St. Xaviers Catholic College of Nursing,
    Chunkankadai,
    Kanyakumari.

13. **Dr. A. Charles Stephen Rajasingh, M.S, M.Ch,**
    Medical Superintendent,
    CSI Mission Hospital,
    Madurai.

14. **Dr. A. Rathinavel, M.S.,M.Ch., Ph.D,**
    Professor and HOD,
    Cardio Thoracic Surgery,
    Thanjavur Medical College,
    Thanjavur.

15. **Dr. V. Ramanujam, M.D, DPM,**
    HOD – Psychiatry,
    Madurai Medical College
    Deputy Superintendent - Govt Rajaji Hospital,
    Madurai.

16. **Dr. T. Kumanan, M.D.,DPM,**
    Professor and HOD – Psychiatry,
    Govt Rajaji Hospital,
    Madurai.

17. **Dr. Uma M.D, DGO,**
    HOD – Dept of OBS & Gynaecoclogy,
    Govt Rajaji Hospital,
    Madurai.

18. **Dr. Revathi Kailairajan,** M.D, DGO,
    Dean,
    Govt Coimbatore Medical College,
    Coimbatore.

19. Dr. Ambigai Meena, M.D, DGO,
HOD – Dept of OBS & Gynaecoclogy,
Govt Rajaji Hospital,
Madurai.

20. Mr. N. Suresh Kumar, M.A, M.Phil,
Assistant Professor cum Clinical Psychologist,
Department of Psychiatry,
Madurai Medical College,
Madurai.

21. Dr. C. Balakrishnamurthy, Ph.D,
Assistant Professor,
Department of Psychology,
PSG College of Arts and Science,
Coimbatore.

22. Dr. G.K. Sellakumar, Ph.D,
Professor in Psychology,
Sri Ramakrishna Institute of Paramedical Sciences,
Coimbatore.

23. Mr. Venkatesan, M.Sc P.G.D.C.A., Ph.D,
Deputy Director of Medical Education (Statistics)
Directorate of Medical Education,
Kilpauk, Chennai.

Appendix - VI. Informed Consent Form

This is to verify that I have been informed about a study concerning the Effect of Complementary and Alternative therapies in terms of Postnatal Blues and Self esteem among postnatal mothers. Mrs. S. Rajamani, Lecturer of College of Nursing, Madurai Medical College, Madurai, Explained that my participation is voluntary and that I may withdraw at any time from the study without jeopardy to myself or family.

Mrs. S.Rajamani has discussed with me the nature of the study informing me that there are no risks in participating in the study. There are no known benefits either and it is unlikely that I will experience any direct benefit.

I will receive no financial compensation for my participation; however, discussions with the researcher may help me to better understand my condition and ways to prevent postnatal Blues and improve self esteem.

My Participation will mean that Mrs. S.Rajamani will meet me and Give teaching (prophylactic information on postnatal Blues. Then postnatal exercises, Pranayama, and Guided Imagery will be given to me for 30 minutes twice a day (10am, and 4pm) for 5 consecutive days. All information I share with Mrs. S.Rajamani will be kept confidential.

I have been given a copy of the summary of this agreement for my review. If I have any further questions I May contact Mrs. S.Rajamani at 9894905800. I will receive information about the results of my participation in the study either by phone, mail, or in person.

PARTICIPANT'S SIGNATURE DATE:

ADDRESS:

RESEARCHER'S SIGNATURE DATE:

ஒப்புதல் அறிக்கை

திருமதி _____ஆகிய நான் இதனால் உறுதிப்படுத்தி கொள்வது என்னவென்றால் எனக்கு திருமதி.ச.ராஜாமணி செவிலியர் விரிவுரையாளர், செவிலியர் கல்லூரி, மதுரை மருத்துவக்கல்லூரி, மதுரை அவர்களால் பிரசவத்திற்கு பின்னான மனச்சோர்வு மற்றும் பேறு கால சுயமரியாதை மீதான - நிரப்பு மற்றும் மாற்று சிகிச்சையின் தாக்கம் பற்றிய ஆய்வை பற்றியும் அதில் நான் பாரபட்சமின்றி பங்கேற்பது பற்றியும் எனக்கு தெளிவாக விளக்கினார்.

மேலும் என் பங்கு இந்த ஆய்வில் தன்னார்வத்துடனும், எனக்கோ, என் குடும்பத்திற்கோ பாரபட்சம் இல்லை என்பதையும், நான் இந்த ஆய்வில் இருந்து எந்த நேரத்திலும், எவ்வித நிபந்தனையுமின்றி விலகிக் கொள்ளலாம் என்றும் தெளிவுபடுத்தினார்.

இந்த ஆய்வில் பங்கேற்பதினால் எனக்கு எவ்விதமான நேர்முக ஆதாயமோ அல்லது பண ஆதாயமோ இல்லை என்றும் அறிந்து கொண்டேன்.

என்னுடைய பங்களிப்பானது திருமதி.ச.ராஜாமணி அவர்களுடன் நாள் ஒன்றுக்கு 30 நிமிடம் வீதம் 2 முறை (10am, 4pm) x 5நாட்களுக்கு பங்கேற்க வேண்டும் என்பதையும், அந்நேரத்தில் பிரசவத்திற்கு பின்னான மனச்சோர்வு, தடுப்புத்தகவல், கற்பிக்கப்பட்டு அதன்பின் பிரசவத்திற்கு பின் செய்யக்கூடிய உடற்பயிற்சி, பிராணயாமா, மனக்கற்பனை வழிகாட்டுதல் முறையை எனக்கு செயல்படுத்தப்படும் என்பதையும் அறிந்தேன்.

என்னிடமிருந்து பெறப்படும் விவரங்களை மற்ற யாரிடத்திலும் பகிர்ந்து கொள்ளப்படமாட்டாது என்பதையும் அறிந்து கொண்டேன். மேலும் இந்த ஒப்பந்தப்படிவத்தின் ஒரு நகலையும் நான் பெற்றுக்கொண்டேன். எனக்கு ஏதேனும் சந்தேகமிருப்பின் திருமதி.ச.ராஜாமணி அவர்களிடமிருந்து 9894905800 என்ற அலைபேசி எண் மூலமாக விவரங்களை பெற்றுக் கொள்ளலாம் என்பதையும் அறிந்து கொண்டேன். இந்த ஆய்வின் முடிவுகளை நேரிலோ, தொலைபேசி மூலமாகவோ, அவரிடமிருந்து அறிந்து கொள்ளலாம் என்பதையும் அறிந்து கொண்டேன்.

பங்குபெறுபவரின் கையொப்பம் தேதி

விலாசம்

ஆய்வாளரின் கையொப்பம் தேதி

Appendix - VII. Patient information proforma

PART – I IDENTIFICATION DATA

1. Hospital number: _____
2. Date: _____
3. Serial number: _____
4. Group: ☐

SOCIO-DEMOGRAPHIC DATA

1 Age ☐

a. < 20 years
b. 20-25 years
c. 26-30 years
d. 31-35 years
e. > 35 years

2 Marital Status ☐

a. Married
b. Unmarried
c. Widow
d. Separated

3. Locality of Residence ☐

a. Rural
b. Urban
c. Suburban

4. Educational Status ☐

a. No formal education

b. Primary Education (V std)

c. High school (X std)

d. Higher Secondary (XII std)

e. Collegiate Education

f. Professional Education

5. Occupation ☐

a. Home maker

b. Daily wage Laborer

c. Farmer

d. Technical Job

e. Health Professional

f. Government Employee

g. Others (Specify)

6. Educational Status of Husband ☐

a. No formal education

b. Primary Education (V std)

c. High school (X std)

d. Higher Secondary (XII std)

e. Collegiate Education

f. Professional Education

7. Occupation of Husband ☐

a. Daily wage Laborer

b. Farmer

c. Technical Job

d. Health Professional

e. Government Employee

g. Others specify

8. Work pattern ☐

a. Sedentary

b. Moderate

c. Strenuous

9. Type of Family ☐

a. Nuclear

b. Joint

c. Extended

10. Income of family Rs per Month ☐

a.1001-3000

b.3001-5000

c. 5000-10000

d. >10000

11. Support group during perinatal period ☐

a. Parents

b. In-laws

c. Husband

d. Relatives

e. Friends

f. Neighbors

g. Health personnel

OBSTETRICAL VARIABLES

12. Whether registered in antenatal OPD ☐

a. Yes

b. No

If yes Number of checkups ……..

13. Previous experience of seeing deliveries /

Postnatal period of relatives / friends. ☐

a. Yes b. No

14. Duration of labour ☐

I Stage

a. < 10 hrs

b. 10 – 12 hrs

c. > 12 Hrs

II Stage ☐

a. < I hr

b. 1 – 2 hrs

c. > 2 hrs

III Stage ☐

a. < 10 min

b. 10 – 20 min

c. > 20 min

15. Mode of delivery ☐

a. Natural / Normal with episiotomy

b. Forceps

c. Vacuum

d. Combined

16. Sex of the child

a. Male ☐

b. Female

17. Birth weight of the baby ☐

a. < 1.5 kgs

b. 1.5 kgs to 2.0 kgs

c. 2.1 kgs to 3.0 kgs

d. 3.1 kgs to 3.5kgs

e. > 3.5 kgs

18. Congenital abnormalities of the child ☐

a. Yes b. No

If any specify ……..

19. Health status of the child ☐

a. Healthy b. Sick

20. History of any complication During Pregnancy ☐

a. Yes b. No

If any specify ……..

21. Family History of any complication During pregnancy ☐

a. Yes b. No

If any specify ……..

Appendix - VIII. Modified Kennerly Postnatal Blues Scale

Below is a list of feelings or descriptions that newly delivered mothers have used to describe how they are feeling, please indicate how you have been feeling today by putting a tick mark in the appropriate box.

Modified Kennerly postnatal blues assessment scale was prepared from Kennerly blues questionnaire. Few items were deleted and few items were added based on the literature review. It consists of 30 items describing the postnatal mother's feelings when newly delivered. Out of the 30 items there are 15 Positive items and 15 Negative items. They are usually described as **Not There at all, Seldom, Often, Always.**

Scoring: The items are scored as follows

For items **1,2,6,7,9,10,11,14,15,16,21,22,25,26,27** it is scored as **Not There at all: 1, Seldom: 2, Often: 3, and Always: 4.**

For items **3,4,5,8,12,13,17,18,19,20,23,24,28,29,30** it is scored reversely as **Not There at all :4, Seldom:3, Often:2, and Always: 1.**

The minimum possible score is 30 and the Maximum Possible score is 120.

Level of Postnatal Blues

No Blues	: 1 - 30
Mild Postnatal Blues	: 31 - 60
Moderate Postnatal Blues	: 61 - 90
Severe Postnatal Blues	: 91 - 120

Modified Kennerly Postnatal Blues Assessment Scale

S. No.	Feeling of Mother's / Criteria	Not there at all / None	Seldom / Mild	Often/ Moderate	Always /Severe
1	I feel like crying continously without able to stop				
2	I feel Mentally tensed up.				
3	I feel that I am able to concentrate on the things happening .				
4	I feel that I am contended and lovable.				
5	I have feelings of elation				
6	I am feeling helpless				
7	I find difficult to show and express my feelings				
8	I feel that I am being Alert				
9	I forget things easily and feel like being muddled				
10	I am feeling anxious and apprehended.				
11	I feel that I want to be alone				
12	I feel that I am Mentally relaxed				
13	I feel Hopeful and have optimistic ideas.				
14	I feel sorry for myself.				

15	I am feeling Emotionally numb and without any feelings				
16	I am feeling Depressed				
17	I Have Good relationship with my family members, Husband, and my friends.				
18	I am feeling Happy				
19	I feel confident				
20	I am changeable in my spirits according to the situation.				
21	I have feelings of tiredness				
22	I Feel Irritable				
23	I feel that I have adequate rest and adequate sleep				
24	I feel being Lively				
25	I have feelings of Over sensitiveness.				
26	I suffer with frequent mood changes				
27	I feel restless				
28	I feel that I am being Calm and tranquil				
29	I feel that I am motivated and lively in accomplishing my goals				
30	I feel that I am self Confident and have Self respect				
	Total				

Appendix - VIII. A. Maternal Self-esteem Scale

Below is a list of feelings or descriptions that newly delivered mothers have describe how they are feeling, please indicate how you have been feeling today by putting a tick mark in the appropriate box.

Maternal self esteem assessment scale was prepared by conducting an extensive Review of Literature from various sources. Based on the literature review and from the views of delivered mothers the items were classified under the mentioned aspects such as **feelings concerning pregnancy, labor, and delivery (item numbers: 1, 2, 3), ability and preparedness for mothering (item numbers 4, 5, 6, 7, 8, 9, 10, 11) acceptance of baby (item numbers : 12, 13, 14), expected relationship with baby (item numbers : 15, 16, 17) parental acceptance (item numbers: 18, 19, 20, 21), body image and health (item numbers: 22, 23, 24, 25).**

Out of the 25 items there were 13 positive items and 12 negative items. They were usually described as strongly agree, agree, disagree, and strongly disagree

SCORING

Scores are calculated as follows:

For items 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 20, 23 and 25.

Strongly Agree = 4

Agree = 3

Disagree = 2

Strongly Disagree = 1

For items 5, 7, 10, 11, 13, 14, 15, 17, 19, 21, 22, and 24.

Strongly Agree = 1

Agree = 2

Disagree = 3

Strongly Disagree = 4

The scale ranges from 1- 100,

Minimum score: 25.

Maximum score: 100.

Higher Score indicates good Self-esteem and lower score indicates a poor self esteem.

Level of self esteem is as follows

1 - 50% - Low self - esteem,

51-75% - Moderate self - esteem,

75 – 100 - Good self - esteem

Maternal self-esteem scale

	STATEMENT	Strongly Agree	Agree	Disagree	Strongly Disagree
I	**Feelings Regarding Pregnancy, Labor, And Delivery**				
1	I took good care of myself during my pregnancy				
2	I felt that Delivery and labor was one of the best experience of my life				
3	I feel that being a mother will be a very rewarding experience				
II	**Ability And Preparedness For Mothering**				
4	I felt that I was emotionally prepared for my baby's birth				
5	I feel guilty about delivering a baby into this world which is full of troubles.				
6	I do not mind staying at home to care for my baby				
7	I feel like I am a failure as a mother				
8	I feel confident that I will be able to teach my baby new things.				
9	I feel adequate to care for my baby				

10	I feel that mothering is not as fulfilling as I thought to be.				
11	I do not feel emotionally secure enough to care for my baby by myself				
III	**Acceptance Of Baby**				
12	I am confident that my baby will be strong and healthy				
13	I am disappointed with the sex of my baby				
14	I am concerned about whether my baby will develop normally				
IV	**Expected Relationship With Baby**				
15	I worry about whether my baby will like me.				
16	I am confident that I will have a close and warm relationship with my baby				
17	I need more time to adjust to my baby				
V	**Parental Acceptance**				
18	I expect I will be at least a good mother as my mother.				
19	All in all, I am inclined to feel that I am a failure.				
20	I looked forward to breast feeding my baby				
21	I worry about being able to fulfill baby's emotional needs.				

VI	**Body Image And Health**				
22	I am worried that my figure will change after delivery				
23	I feel as though I have plenty of energy to take care of my baby				
24	I feel that I am not worthy as equally as others or when compared with others.				
25	I felt that I looked very good during my pregnancy				

தன்னிலை விளக்கம்

1. மருத்துவ பதிவு எண். :
2. தேதி :
3. வரிசை எண். :
4. பிரிவு : அ) சோ 

ஆ) க

அடிப்படை குறிப்புகள்

1. வயது 

அ) 20 வயதிற்குள்
ஆ) 20 - 25 வயது
இ) 26 - 30 வயது
ஈ) 31- 35 வயது
உ) 35 வயதிற்கு மேல்

2. திருமண விபரம் 

அ) திருமணம் ஆனவர்
ஆ) திருமணம் ஆகாதவர்
இ) விதவை
ஈ) விவாகரத்து ஆனவர்
உ) பிரிக்கப்பட்டவர்

3. வசிக்கும் இடம் 

அ) கிராமம்
ஆ) புறநகர்
இ) நகரம்

4. கல்வித்தகுதி 

அ) கல்வித்தகுதியற்றவர்
ஆ) ஆரம்பக்கல்வி (5-ம் வகுப்பு வரை)
இ) உயர்நிலைக்கல்வி (6-10 வகுப்பு வரை)
ஈ) மேல்நிலைக்கல்வி (11,12-ம் வகுப்பு)
உ) கல்லூரி கல்வி
ஊ) தொழிற்கல்வி

5. தொழில் 

அ) இல்லத்தரசி
ஆ) தினக்கூலி வேலை
இ) விவசாயம்
ஈ) தொழிற்நுட்பவேலை
உ) மருத்துவப்பணியாளர்
ஊ) அரசுப்பணியாளர்
எ) மற்றவை

6. கணவரின் கல்விநிலை

அ) கல்வித்தகுதியற்றவர்
ஆ) ஆரம்பக்கல்வி (5-ம் வகுப்பு வரை)
இ) உயர்நிலைக்கல்வி (6-10 வகுப்பு வரை)
ஈ) மேல்நிலைக்கல்வி (11, 12ம் வகுப்பு)
உ) கல்லூரி கல்வி
ஊ) தொழிற்கல்வி

7. கணவருடைய தொழில்

அ) தினக்கூலி வேலை
ஆ) விவசாயம்
இ) தாழிற்நுட்ப வேலை
ஈ)மருத்துவப்பணியாளா
உ) அரசுப்பணியாளர்
ஊ) மற்றவை

8. தொழில் முறை

அ) இலகு வேலை
ஆ) மிதமான வேலை
இ) கடின வேலை

9. குடும்பத்தின் தன்மை

அ) தனிக்குடும்பம்
ஆ) கூட்டுக்குடும்பம்
இ) தொடர்குடும்பம்

10. குடும்பத்தின் மொத்த மாத வருமானம்

அ) ரூபாய். 1001.∴- முதல் 3000.∴- வரை
ஆ) ரூபாய். 3001.∴- முதல் 5000.∴- வரை
இ) ரூபாய் 5000.∴- முதல் 10,000.∴- வரை
ஈ) ரூபாய் 10,000.∴- க்கு மேல்

11. பிரசவத்திற்கு பின் ஆதரவளிப்பவர்

அ) பெற்றோர்
ஆ) கணவரின் உறவினர்
இ) கணவர்
ஈ) உறவினர்
உ) நண்பர்கள்
ஊ) அண்டை வீட்டார்
எ) மருத்துவ பணியாளர்

கர்ப்பகால தகவல்கள்

12. பிரசவத்திற்கு முன், கர்ப்ப கால பரிசோதனை செய்துள்ளீரா? ஆம் எனில், எத்தனை முறை பரிசோதனை செய்துள்ளீர்கள்?

அ)ஆம் ஆம் எனில், எத்தனை முறை.....

ஆ) இல்லை

13. இதற்கு முன்னால் தோழிகள், உறவினர்களின் பிரசவம் ∴ பிரசவ காலத்திற்கு பின்பு கவனித்த அனுபவம் உண்டா?

அ) ஆம்

ஆ) இல்லை

14. பிரசவத்தின் கால அளவு

முதல் நிலை : அ)10 மணி நேரத்திற்குள்
ஆ)10-12 மணி நேரத்திற்குள்
இ)12 மணி நேரத்திற்குள் மேல்

இரண்டாம் நிலை :அ)1 மணி நேரத்திற்குள்
ஆ)1-2 மணி நேரம்
இ)2 மணி நேரத்திற்கு மேல்

மூன்றாம் நிலை :அ)10 நிமிடத்திற்குள்
ஆ)10-20 நிமிடங்கள்
இ)20 நிமிடத்திற்கு மேல்

15. பிரசவத்தின் விதம் ∴ தன்மை

அ) பிடவ வாய் திறப்பு
ஆ) ஆயுதப்பிரசவம்
இ) வெற்றிட முறை பிரசவம்
ஈ) இணைந்து

16. குழந்தைகளின் பாலினம்

அ) ஆண்
ஆ) பெண்

17. பிறந்த பொழுது குழந்தையின் எடை

அ) 1.5 கிலோ கிராமிற்குள்
ஆ) 1.5 கி.கி. முதல் 2.5 கி.கி. வரை
இ) 2.5 கி.கி. முதல் 3.5 கி.கி. வரை
ஈ) 3.5 கிலோ கிராமிற்கு மேல்

18. பிறக்கும் பொழுது குழந்தைக்கு ஏதேனும் பிறவி குறைபாடுகள் இருந்ததா? ☐

அ) ஆம் ஆம் எனில், குறிப்பிடுக.....
ஆ) இல்லை

19. குழந்தையின் உடல் நிலத்தின் நிலை ☐

அ) ஆரோக்கியம்
ஆ) சுகவீனம்

20. கர்ப்ப காலத்தின் போது ஏதேனும் பின் விளைவுகள் இருந்ததா? ☐

அ) ஆம் ஆம் எனில், குறிப்பிடுக.....
.
ஆ) இல்லை

21. உங்கள் குடும்பத்தில் யாருக்கேனும் கர்ப்ப காலத்தின் போது பின் விளைவுகள் இருந்ததா? ☐

அ) ஆம் ஆம் எனில், குறிப்பிடுக.....

ஆ) இல்லை

திருத்தியமைக்கப்பட்ட கென்னர்லி பிரசவத்திற்கு பின்னான மனச்சோர்வு மதிப்பீடு அளவுகோல்

வ.எண்	தாயின் உணர்வுகள்	எப்பொழுதும் இல்லை	எப்போதாவது	அடிக்கடி	எப்பொழுதும்
1.	அழுகையை என்னால் நிறுத்த முடியாதது போல் உணர்கிறேன்				
2.	நான் மன உளைச்சலாக உணர்கிறேன்				
3.	என்னை சுற்றி நடக்கும் நிகழ்வுகளில் என்னால் கவனம் செலுத்த முடியும் என்று நான் உணர்கிறேன்.				
4.	நான் அன்பாகவும் அரவணைப்பாகவும் இருப்பதாக உணர்கிறேன்				
5.	எனக்கு உற்சாகமான உணர்வு இருக்கிறது.				
6.	நான் உதவியற்ற நிலையில் இருப்பதாக உணர்கிறேன்				
7.	எனது உணர்வுகளை காண்பிக்கவும், வெளிப்படுத்தவும் எனக்கு கடினமாக இருப்பதாக உணர்கிறேன்				
8.	நான் எச்சரிக்கையாக இருப்பதாக உணர்கிறேன்				
9.	நான் எளிதில் காரியங்களை மறந்து தடுமாறுவதாக உணர்கிறேன்				
10.	நான் கவலையாகவும், படபடப்பாகவும் இருப்பது போல் உணர்கிறேன்.				
11.	நான் தனியாக இருக்கவேண்டும் என்று உணர்கிறேன்				
12.	நான் மன அமைதியாக இருப்பது போல் உணர்கிறேன்.				
13.	நம்பிக்கையும், ஆக்கப்பூர்வமான எண்ணங்களும் என்னுள் இருப்பதாக நான் உணர்கிறேன்.				
14.	எனக்காக நான் வருத்தப்படுவது போல் உணர்கிறேன்.				
15.	எனது உணர்ச்சிகள் மரத்து போய் உணர்வற்ற நிலையில் இருப்பது போல் உணர்கிறேன்				
16.	நான் மனச்சோர்வுடன் இருப்பதாக உணர்கிறேன்.				
17.	எனது குடும்பத்தினர், கணவர் மற்றும்				

வ.எண்	தாயின் உணர்வுகள்	எப்பொழுதும் இல்லை	எப்போதாவது	அடிக்கடி	எப்பொழுதும்
	நண்பர்களிடையே எனக்கு சுமூகமான நட்புறவு இருக்கிறது.				
18.	நான் மகிழ்ச்சியாக இருப்பதாக உணர்கிறேன்.				
19.	நான் திட நம்பிக்கையுடன் இருப்பதாக உணர்கிறேன்.				
20.	நான் எனது ஆன்மாவின் நம்பிக்கையை சூழ்நிலைக்கேற்ப மாற்றிக்கொள்ள கூடியவளாக இருப்பதாக உணர்கிறேன்.				
21.	எனக்கு களைப்புணர்வு இருப்பதாக உணர்கிறேன்.				
22.	நான் எரிச்சலாக இருப்பதாக உணர்கிறேன்				
23.	எனக்கு போதுமான அளவு ஓய்வும், தூக்கமும் இருப்பதாக நான் உணர்கிறேன்.				
24.	நான் உற்சாகமாக இருப்பதாக உணர்கிறேன்				
25.	எனக்கு மிகவும் உணர்ச்சிவசப்படக்கூடிய உணர்வு இருப்பதாக நான் உணர்கிறேன்.				
26.	அடிக்கடி மாறும் மனநிலையால் நான் இடைஞ்சல் அடைகிறேன்.				
27.	ஓய்வற்ற செயல்நிலை எனக்கு இருப்பதாக உணர்கிறேன்.				
28.	நான் அமைதியாகவும், சாந்தமாகவும் இருப்பதாக உணர்கிறேன்				
29.	நான் இலக்குகளை அடைய உந்துதல் மற்றும் உற்சாகம் எனக்கு இருப்பதாக உணர்கிறேன்				
30.	எனக்கு சுயமரியாதையும், தன்னம்பிக்கையும் இருப்பதாக நான் உணர்கிறேன்.				

தாயின் சுயமரியாதையை அளவிடும் அளவுகோல்

வ.எண்	தாயின் உணர்வுகள்	உறுதியாக ஏற்றுக்கொள்கிறேன்	ஏற்றுக்கொள்கிறேன்	ஏற்றுக்கொள்ளவில்லை	உறுதியாக ஏற்றுக்கொள்ளவில்லை
I	**கர்ப்பகால பிரசவம், குழந்தை பேறு குறித்த உணர்வுகள்**				
1.	என்னை கர்ப்ப காலத்தில் நன்றாக கவனித்து கொண்டார்கள்				
2.	நான் குழந்தை பேறு மற்றும் பிரசவத்தை வாழ்வின் சிறந்த அனுபவமாக உணர்கிறேன்				
3.	நான் ஒரு தாயாவது ஒரு வெகுமதி அனுபவமாக இருக்கும் என்று நினைக்கிறேன்				
II	**தாய்மை அடைவதற்கு ஆயத்தமாயிருத்தல்**				
4.	நான் உணர்வுபூர்வமாக என் குழந்தையின் பிறப்பிற்கு தயார் என்று உணர்கிறேன்				
5.	நான் பிரச்சனைகள் நிறைந்த இந்த உலகத்தில் குழந்தை பெற்றுக் கொள்வதால் குற்ற உணர்விற்கு உள்ளாகிறேன்.				
6.	நான் என் குழந்தையை வீட்டில் இருந்து பார்த்து கொள்ள கவலைப்படமாட்டேன்				
7.	நான் ஒரு அம்மாவாக இருப்பதால் தோல்வியடைவதாக உணர்கிறேன்				
8.	எனக்கு என் குழந்தை புதிய விஷயங்களை கற்றுக் கொள்ளும் என்று நம்பிக்கையாக உணர்கிறேன்				
9.	என் குழந்தையை பார்த்துக் கொள்ள போதுமானதாக உணர்கிறேன்				
10.	நான் நினைத்தது போன்ற தாய்மையை நிறைவேற்ற முடியாததுபோல் உணர்கிறேன்				
11.	என்னால் என் குழந்தையை பராமரிப்பதற்கு போதுமான பாதுகாப்பு உணர்வு இல்லை என உணர்கிறேன்				

வ.எண்	தாயின் உணர்வுகள்	உறுதியாக ஏற்றுக்கொள்கிறேன்	ஏற்றுக்கொள்கிறேன்	ஏற்றுக்கொள்ளவில்லை	உறுதியாக ஏற்றுக்கொள்ளவில்லை
III	**குழந்தையை ஏற்றுக் கொள்ளுதல்**				
12.	என் குழந்தை வலுவாக மற்றும் ஆரோக்கியமாக இருக்கும் என்று உறுதியாக இருக்கின்றேன்				
13.	நான் என் குழந்தையின் பாலினத்தை கண்டு ஏமாற்றமடைந்தேன்				
14.	என்னுடைய குழந்தையை சாதாரணமாக உருவாக்க வேண்டும் என்பதை பற்றி தான் கவலைப்படுகிறேன்				
IV	**குழந்தையுடன் எதிர்ப்பார்க்கப்பட்ட உறவு**				
15.	என் குழந்தைக்கு என்னை பிடிக்குமா என்பதை பற்றி கவலைபடுகிறேன்				
16.	நான் என் குழந்தைக்கு நெருக்கமான மற்றும் இதமான உறவாக இருக்க வேண்டும் என்பதில் உறுதியாக இருக்கிறேன்				
17.	நான் என் குழந்தை உடன் அனுசரித்து செலவிடுவதற்கு அதிக நேரம் வேண்டும்				
V	**பெற்றோராக ஒப்புக் கொள்ளுதல்**				
18.	நான் என் அம்மாவை போன்று குறைந்த பட்சம் ஒரு நல்ல தாயாக இருக்க வேண்டும் என்று எதிர்ப்பார்க்கிறேன்				
19.	நான் அனைத்திலும் தோல்வி அடையும் எண்ணமுடையவளாக இருக்கிறேன்				
20.	நான் என் குழந்தைக்கு தாய்ப்பால் ஊட்ட எதிர்பார்த்துக் கொண்டிருக்கிறேன்				
21.	நான் என் குழந்தையின் உணர்ச்சி பூர்வமான தேவைகளை பூர்த்தி செய்ய முடியாமல் இருப்பதாக உணர்கிறேன்				

VI	**உடல்தோற்றம் மற்றும் உடல் நலம்**				
22.	நான் என்னுடைய உடல் தோற்றம் பிரசவத்திற்கு பிறகு மாறும் என்று கவலைப்படுகிறேன்				
23.	நான் என் குழந்தையை கவனித்து கொள்ள நிறைய சக்தி வேண்டும் என்று உணர்கிறேன்				
24.	நான் மற்றவர்களுடன் என்னை ஒப்பிடும்போது மற்றவர்களை போல் தகுதியாக இல்லை என உணர்கிறேன்				
25.	என் கர்ப்பகாலத்தில் நல்ல உடற்தோற்றம் இருந்ததாக உணர்கிறேன்				

Appendix - IX. Guided Imagery Protocol (English)

There are generally three stages to guided imagery relaxations visualization and positive suggestion.

STAGE I (RELAXATION STAGE - 5min)

1. Find a comfortable place to sit or lie down
2. close your eyes
3. Take 3 deep breaths in – out, in – out, in – out
4. Relax the body starting at the top of your head and working down to your toes.
5. Relax your scalp, relax your brow, relax your chin, cheek, ears, relax your nose, relax your eyes, eyelids, relax your lips;
6. Imagine them fat, full completely relaxed.
7. Relax your tongue, the roof of your mouth, your throat; relax all the muscles in your throat.
8. Relax your neck, feel the tension leave your neck.
9. Relax your hands, your fingers, feel the tension flow out of your fingers.
10. Enjoy the feelings of both arms being heavy, at ease, completely relaxed.
11. Relax all the muscles of your back, spinal column, relax the muscles of your chest, your abdomen, and relax the muscles of your pelvic area, your buttocks.
12. Let the seat you're in or the bed you're lying on support the weight of your buttocks.
13. Then relax your thighs, your knees, the muscles of your lower legs, relax your feet, your toes.

14. Imagine all the tension flowing out of your toes so that both legs and both feet are heavy, relaxed and free of any tension.
15. Relax your mind, your heart, your lungs and all your internal organs.
16. Lie or sit there for a moment enjoying the feeling of total relaxation.

STAGE II. (VISUALIZATION – 8 min)

17. Then visualize a forest which is full of trees and the sun filtering through the branches of the trees and the sky above the trees.
18. Hear the hush of wind rising, the rustle of the leaves on the trees, the hush of wind rising and quietening.
19. Feel the gentle breeze on your face and hear the birds chirping at the bark of the trees.
20. Then visualize a water fall on a mountain, imagine first what this looks like, the rushing water, the stream flowing from it.
21. Then imagine this place would smell damp and musty or fragrant pine.
22. Next listen to sounds you would hear if you were there the water rushing over rocks, birds singing.
23. Feel the ground feel beneath your feet. It is rocky and rough, a soft and smooth from pine needles or moss?
24. The chill water from the falls runs down the stream as it runs the way it touches your feet and washes your feet.
25. While the water washes your feet say to yourself my tension has flowed out of my mind and body, the water has washed out the pain from my body.
26. Look up and down all around. Notice what you see and how it makes you feel.
27. Say to yourself. “I am relaxed.

STAGE III. (POSITIVE SUGGESTION – 2min)

29. When you have thoroughly visualized this place, open your eyes but stay in this same Comfortable position.

30. Continue to breathe smoothly and rhythmically Take 3 deep breaths in – out, in – out, in – out.

31. Take a few moments to experience and enjoy your relaxation.

32. Whenever pain reminds or whenever you have tension, you can repeat this technique, your special place is available to you whenever you need, go there and relax.

மனக்கற்பனை வழிநடத்துதல் பற்றிய செயல்முறை

மனக்கற்பனை வழிநடத்துதல் செயல் முறையில் மூன்று நிலைகள் உள்ளன.

நிலை -1 (ஆசுவாசப்படுத்தும் நிலை: 5நிமிடம்)

1. முதலில் சவுகரியமான ஒரு இடத்தை உட்காருவதற்கோ அல்லது படுக்கவோ தேர்ந்தெடுத்துக் கொள்ளவும்.
2. கண்களை மூடிக்கொள்ளவும்
3. நன்றாக ஆழமாக 3முறை சுவாசம் எடுத்து விடவும்.
4. தலை முதல் தொடங்கி பாதம் முடிய நன்றாக உடலை சாந்தப்படுத்தி கொள்ளவும்.
5. தலை, புருவம், தாடை, கன்னம், காது, மூக்கு, கண்கள், கண்இமை மற்றும் உதட்டை ஆசுவாசப்படுத்திக் கொள்ளவும்.
6. பின்பு நாவு, தொண்டை மற்றும் அதன் எல்லா தசைகளின் இறுக்கத்தை குறைக்கவும்,
7. கழுத்தை ஆசுவாசப்படுத்திய பின் கழுத்திலிருந்து அழுத்தம் விலகியதாக உணருங்கள்
8. கைகளையும், கைவிரல்கள், ஆசுவாசப்படுத்தி அதன் அழுத்தம் விரல்கள் மூலம் வெளியே வழிந்தோடுவதை உணருங்கள்
9. கணமாக இருந்த இருகைகளும் இலகுவாக இருப்பதாகவும், முழுவதும் ஆசுவாச நிலையில் இருப்பதாகவும் எண்ணி சந்தோஷப்படவும்.
10. பின்பு முதுகு, தண்டுவடம், நெஞ்சு, தொந்தி வயிற்றுப்பகுதி, இடுப்புப்பகுதி, புட்டம் ஆகிய உறுப்புகளின் தசைகளை எல்லாம் ஆசுவாசப்படுத்திக்கொள்ளவும்.
11. அதன்பின் தொடைகள், முட்டி, கால்கள். பாதம் மற்றும் கால்விரல்கள் ஆகியவற்றை ஆசுவாசப்படுத்திக் கொள்ளவும்.
12. எல்லா அழுத்தங்களும் கால்விரல்கள் வழியாக வெளியே வழிந்தோடுவதாக கற்பனை செய்து கொள்ளவும் ஆகையால் இரண்டு கால்களும், இரண்டு பாதங்களும் கணமாக ஆசுவாச நிலையில் எந்த அழுத்தமும் இல்லாமல் உள்ளதை உணருங்கள்.

13. பின்பு உங்களின் மனசு, இதயம், நுரையீரல் மற்றும் இதர உள்ளுறுப்புகளையும் ஆசுவாசப்படுத்திக் கொள்ளவும்.
14. பின் ஒரு கனம் உட்கார்ந்து / படுத்து முழுமையான ஆசுவாச நிலையில் சந்தோஷமடையவும்.

நிலை: 2 கற்பனை - 8 நிமிடம்

15. ஒரு காடும் அதன் நடுவில் உயர்ந்த மரங்களும், மரக்கிளையினுள் சூரிய கதிர்கள் ஊடுருவுவதையும், மரங்களுக்கு மேலுள்ள மேகத்தையும் / வானத்தையும் கற்பனை செய்து கொள்ளவும்
16. மேலெழும்பும் காற்றின் ஓசையையும், சருகுகளின் ஓசையையும், மெல்லிய தென்றலின் ஓசை எழும்புதலையும், அமைதலாயிருப்பிதையும் கேளுங்கள்.
17. முகத்தில் தொடும் மெல்லிய தென்றலையும், மரக்கிளைகளில் பறவைகள் இடும் சத்தத்தையும் கேட்டு உணருங்கள்.
18. பின் ஒரு மலையிலிருந்து விழும் அருவியை கற்பனை செய்து கொள்ளுங்கள். முதலில் இது எப்படி இருக்கும் என்று நினைத்து பாருங்கள். பெரிய இரைச்சலோடு விழுவதையும், நீரோடையில் இருந்து நீர் ஓடுவது போன்றும் கற்பனை செய்து கொள்ளுங்கள்.
19. பிறகு இந்த இடத்தில் என்ன வாசம் வீசும் என்பதை கற்பனை செய்து பார்க்கவும். ஊசி இலை மரத்தின் வாசனை மற்றும் மண்வாசைன கற்பனை செய்து கொள்ளுங்கள்.
20. பிறகு பாறைகள் வழியாக இரைச்சலோடு வழிந்தோடும் சத்தத்தையும், பறவைகள் பாடும் சத்தத்தையும் கேட்கவும்
21. உங்களின் காலடியில் தரை எவ்வாறு உள்ளது என்பதை உணரவும், கரடுமுரடாகவும், மேடு பள்ளம் நிறைந்ததாகவும், பாசி படிந்ததாகவும் உள்ளதை உணரவும்.
22. பின் குளிர்ந்த நீர் உங்கள் கால்களை தொட்டு கழுவி ஓடுவரை உணரவும்.
23. அவ்வாறு நீர் உங்கள் பாதங்களை கழுவி ஓடும் போது "எனக்குள் இருந்த அழுத்தம், வலி என் உடலில் இருந்து வெளியே நீரில் அடித்து செல்கிறது என்று உங்களுக்குள் சொல்லிக் கொள்ளவும்.

24. பின்பு உங்களை சுற்றிலும் மற்றும் மேலும் கீழும் பார்க்கவும். உங்களை எவ்வாறு உணரச்செய்கிறது என்று கவனித்து கொள்ளவும்
25. நாள் இளைப்பாறிவிட்டேன் என்று உங்களுக்குள் கூறுங்கள்.

நிலை : 3 (உடன்பாடான கருத்து - 2 நிமிடம்)

26. பின்பு மெதுவாக கண்களை திறக்கவும், ஆனால் அதே சகநிலையிலேயே இருங்கள்.
27. தொடர்ந்து மெதுவாகவும், நிதானமாகவும் 3 முறை சுவாசம் எடுத்து விடவும்.
28. உங்களின் ஆசுவாசநிலையையும் அதன் அனுபவத்தையும் பற்றி சந்தோஷப்பட ஒரு சில கனங்கள் எடுத்துக் கொள்ளவும்.
29. எப்பொழுதெல்லாம் வலி மற்றும் மன அழுத்தம், தூக்கமின்மை இருக்கும்போது இந்த செயல்பாட்டை நீங்கள் மீண்டும் செய்துக் கொள்ளலாம். மேலும் உங்களுக்கென்று ஒரு விசேஷித்த இடம் உண்டு. அங்கு நீங்கள் எப்பொழுது வேண்டுமானாலும் சென்று உங்களை ஆசுவாசப்படுத்திக் கொள்ளலாம்.

Appendix - IX. A. Exercises

After the delivery, all women should be encouraged to do simple postnatal exercises at any time that she finds convenient. The exercises help to tone up the pelvic and abdominal walls and to correct postural defects. If there are no medical contra-indications, exercises can be started after s normal delivery and after 6 weeks of a caesarian section. The different types of exercises are described below.

1. Exercises for the Abdominal Muscles

- Lie on your back with legs flexed at the hip and knee joint.
- Breathe out slowly.
- Gently pull the lower part of the abdomen below the umbilicus keeping the spine still and breathing normally.
- Draw the abdominal muscles in as much as possible.
- At the same time, flatten the back, allowing the small of the back to touch the floor.
- Hold breath for 10 seconds and relax gently.
- The muscles are then released slowly in time with drawing in the breath.

Advantages

- This exercise tones the deep transverse abdominal muscles which is the main postural support for the spine.
- Prevents backache in future.
- Reduces possibility of air embolus into the placental site.

2. **Pelvic Floor Excercises / Kegel's Exercises**.

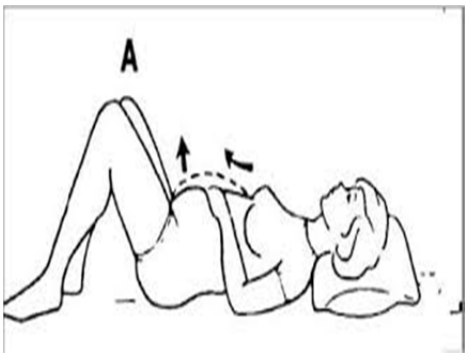
The pelvic floor muscles have been under strain during pregnancy and stretched during delivery. It may be painful and difficult to contract the muscles in the postnatal period. Hence the mothers should be encouraged to perform this exercise as often as possible.

- Sit, stand or half lye with legs slightly apart.
- Contract the pelvic muscles in the way of holding in urine or a bowel motion.
- The contraction is held for some time and then relaxed.
- Repeat upto 10 times.
- This exercise should be repeated as often as possible throughout the day.

Advantages

- It tones the pelvic muscles.
- It prevents uterine prolapse and stress incontinence in future.
- Ensures normal sexual satisfaction

3. Pelvic Tilting Exercise



- Lie in half lying position well supported with pillows.
- Keep the knees bent and feet flat.
- Place one hand under the small of the back and the other on top of the abdomen.
- Tighten the abdomen, buttocks and press the small of the back down to the underneath hand.
- Breathe normally and hold breath upto 10 seconds then relax.
- Repeat upto 10 times.

உடற்பயிற்சிகள்

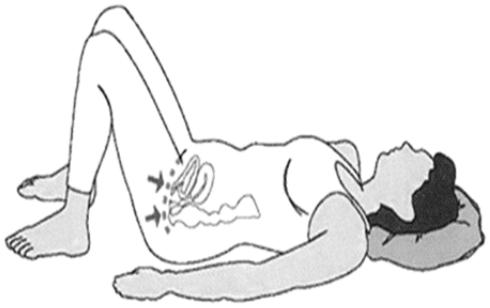
1. <u>வயிற்று தசை பயிற்சி / இறுக்கும் உடற்பயிற்சி</u>

- மல்லாக்க படுத்து கால்களை முழங்காலிட்டுக் கொள்ளவும்.
- மூச்சை உள்ளிழுத்து வெளியே விடவும்.
- மெதுவாக அடிவயிற்று பகுதியை உள்ளிழுக்கவும்
- பத்து நொடிகளுக்கு உள்ளிழுத்து வைக்கவும்
- பின்பு மெதுவாக தசைகளை தளரவிடவும்.
- இப்பயிற்சியை பத்து முறை செய்யவும்.

நன்மைகள்

- இந்த உடற்பயிற்சியை செய்வதன் மூலம் தண்டு வடம் பலப்படும்.
- வயிற்றுப்பகுதி தசைகள் பலப்படும்.
- பிற்காலத்தில் முதுகுவலி வருவதை தடுக்கும்
- கர்ப்பப்பை நன்றாக சுருங்க உதவும்.

2. .அடிவயிற்று தசை பயிற்சி (Pelvic Floor)

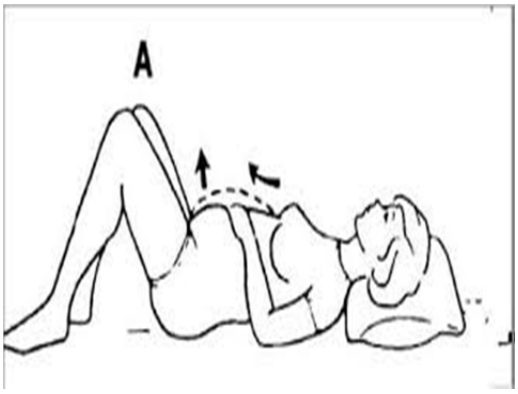


- மல்லாக்க படுத்து இரண்டு கால்களையும் சிறிது விரித்து வைத்துக் கொள்ளவும்.
- அடிவயிற்று தசகைளை சிறுநீரை அடக்குவது போலவும் மலத்தை அடக்குவது போலவும் கவனமாக சிறிது நேரம் அதே நிலையில் இருந்து பிறகு தளர்த்த வேண்டும்.
- இப்பயிற்சியை பத்து முறை செய்யவும்.

நன்மைகள்

- இப்பயிற்சி செய்வதன் மூலம் அடிவயிற்று தசைகள் பண்படும்
- இடுப்புத்தசைகள். ஆசனவாய் தசைகள், பிறப்புறுப்பு தசைகள் பலப்படும்.
- கருப்பை அடித்தள்ளுதலை தடுக்கும்
- கட்டுப்படுத்தமுடியாது சிறுநீர் வெளியேறுவதை தடுக்கும்.
- சிறுநீர் தாடை தசைகள் பண்படும்
- சகஜமான தாம்பத்ய திருப்தியை நிச்சயப்படுத்தி உறுதிசெய்யும்

3. இடுப்பெலும்புக் கட்டு கவிழ் பயிற்சி



- மல்லாக்க படுத்து தலைக்கு அடியில் தலையனையை ஆதரவாக வைத்து தாங்கவும்.
- முழங்கால்களை மடக்கி பாதங்களை சப்பட்டையாக தரையில் வைத்துக்கொள்ளவும்
- ஒரு கரத்தை முதுகுக்கு அடியிலும், மற்றொரு கரத்தை வயிற்றுபாகத்திற்கு மேலும் வைத்துக் கொள்ளவும்.
- வயிற்றுப்பகுதியையும் புட்டத்தையும் நன்றாக கீழே உள்ள கைகளின் மேல் முதுகின் அடிப்பாகம் தரையில் சமமாக படும் படி அழுத்தவும்.
- சாதரணமாக மூச்சிழுத்து பத்து வினாடிகள் அடக்கி வைத்து பின்பு தளர்த்தவும்.
- இப்பயிற்சியை பத்துமுறை மீண்டும் செய்யவும்.

நன்மைகள்

- இடுப்பெலும்பு மீண்டும் சகஜ நிலைக்கு திரும்பும்.
- உடல் பிரதிமை சகஜ நிலைக்கு திரும்பும்
- வயிற்றுப்பகுதி மற்றும் முதுகுப்பகுதி தசைகளை வலிமையாக்கி பண்படுத்தும்.

Appendix - IX B. Pranayama

Introduction

The origins of Pranayama have been traced as far back as the ancient rishis, 800 years ago. Pranayama have been used to restore and maintain health and to elevate self awareness and consciousness. 'Prana' translates as life force or 'energy'. The ancient science of breath is called Pranayama meaning both 'control of energy' and 'expansion of energy'. These breathing techniques have the potential to relieve anxiety and related medical illnesses. Through this information can know about the Pranayama to reduce anxiety.

Definition

Pranayama breathing is often performed in yoga and meditation. It means the practice of voluntary breath control and refers to inhalation, retension and exhalation that can be performed quickly or slowly.

- Jerathet. al. (2006)

Purposes

- It reduces anxiety
- It keeps steady mind and body
- It reduces depression
- It maintains good health
- It promotes quality of life
- It provides oxygen to the cells

Indications

- Anxiety disorders
- Depressive disorders
- Hypertension and heart diseases
- Insomnia
- Tension headache
- Smoking and substances abuse
- Obesity
- Spleen disorders

Contra-indications

- Nasal blocks.
- Major medical illness.
- Clients with filled stomach.
- Severe asthma.

Frequency

Once a day, in the morning.

Duration

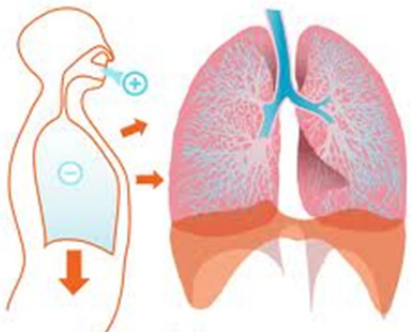
10 minutes duration for 20 breathing cycles.

Position

Sugasana.

Procedure

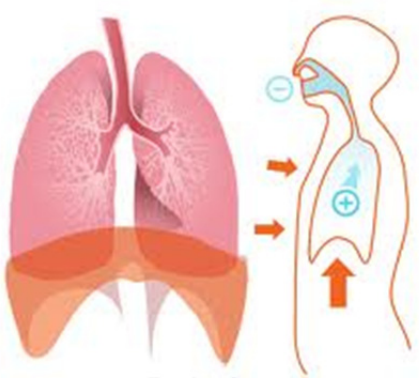
- Explain the procedure and its benefits to the client.
- Demonstrate and ask the client to sit in padmasana. The back should be straight.
- Explain the clients to keep concentration on the chest while during follow 4 steps.
- **Step 1:** Inspiration, end inspiration. Which focuses on controlling the intake of air keeping it smooth and efficient with the time duration of 4 seconds. Inhale through the both nostrils.
- **Step 2:** Breath holding. Which focuses on controlling the retention of air within the lungs after an inhalation with the time duration of 4 seconds.



INSPIRATION, END INSPIRATION

- **Step 3:** Expiration, end expiration. Which focuses on controlling the expelling of used air and waste from the lungs with the time duration of 6 seconds.

- **Step 4 :** Breath holding. Which focuses on controlling the retention of empty lungs after an exhalation with the time duration of 2 seconds.



EXPIRATION, END EXPIRATION

- The time ratio of each step is respectively, 4:4:6:2 seconds with 20 seconds rest for each cycle. Likewise, 10 cycles should be done.
- After 10 cycles close your Pranayama with a deep breathing and slowly release it.
- Explain the client slowly to normal position.

பிராணாயாமா

முன்னுரை

சுமார் 800 வருடங்களுக்கு முன்பாக பழங்கால ரிஷிகளினால் பிராணாயாமா முறை கண்டறியப்பட்டது. பிராணாயாமா முறை உடல் ஆரோக்கியத்தை பராமரிக்கவும் நிலைப்படுத்தவும் மற்றும் விழிப்புணர்வை அதிகரிக்கவும் பயன்படுத்தப்பட்டது. 'பிராணா' என்பது வாழ்க்கை வேகத்தையோ அல்லது ஆற்றலையோ குறிக்கிறது. முந்தைய காலத்தில் சுவாச அறிவியலில் பிராணாயாமா என்பது ஆற்றலைக் கட்டுப்படுத்துவது ஆற்றலை விரிவுபடுத்துவதுமே. இந்த சுவாச முறையினால் மனபதட்டத்தையும் அதன் சம்பந்தமான மருத்துவ நோயையும் குறைக்க முடியும். இந்த தகவலின் வழியே பிராணாயாமா பயத்தைக் குறைக்கும் என்பதை அறிவோம்.

வரையறை

பிராணாயாமா சுவாசமுறை என்பது யோகா மற்றும் தியான முறை வழியே நிறைவேற்றப்படுகின்றது. அதாவது சாதாரண சுவாசத்தை கட்டுப்படுத்துவதும் உள்ளிழுத்தபடியே தேக்குவதும் மற்றும் வெளியிடுவதையும் குறிக்கின்றது. இந்த முறையை வேகமாக அல்லது மெதுவாக செய்யப்படுகிறது. – ஜெராதெட். (2006)

நோக்கங்கள்

- மனபதட்டத்தைக் குறைக்கிறது.
- மனதினையும் உடலையும் நிலையாக வைக்கிறது.
- மனஅழுத்தத்தைக் குறைக்கிறது.
- நல்ல உடல் ஆரோக்கியத்தை பராமரிக்கிறது.
- வாழ்க்கையின் தரத்தை உயர்த்துகிறது.
- உடலின் செல்களுக்கு ஆக்சிஜன் அளிக்கிறது.

உபயோகிக்கக்கூடியவர்கள்

- மனப்பதட்டம்
- மனஅழுத்தம்
- உயர் இரத்த அழுத்தம் மற்றும் இருதய நோய்
- தூக்கமின்மை
- படபடப்பினால் வரும் தலைவலி
- புகை மற்றும் போதை பழக்கம்
- உடல் பருமன்
- மண்ணீரல் பிரச்சினைகள்

உபயோகிக்கக்கூடாதவர்கள்

- மூக்கு அடைப்பு
- தீவிர நோய்
- நிரம்பிய வயிறு உடையவர்கள்
- தீவிர ஆஸ்துமா

கொடுக்கும் தவணைகள்

- ஒரு நாளில் ஒரு முறை – காலை நேரம்

கால அளவு

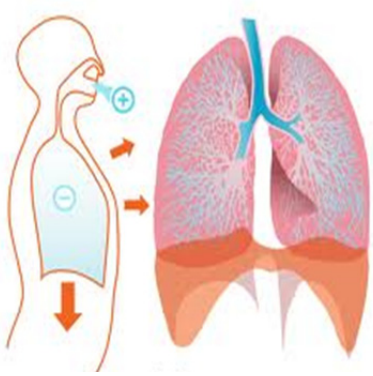
- 10 நிமிடங்களில் 10 சுவாச முறைகள்.

நிலை

- சுஹாசணா (சாதாரண நிலையில் கால்களை மடக்கி அமர்ந்து, கைகளை முழங்காலின் மேல் வைத்து கட்டைவிரல் மற்றும் ஆழ்காட்டி விரலை குவிந்த நிலையில் வைத்து மற்ற மூன்று விரல்களையும் விரித்து வைக்க வேண்டும்)

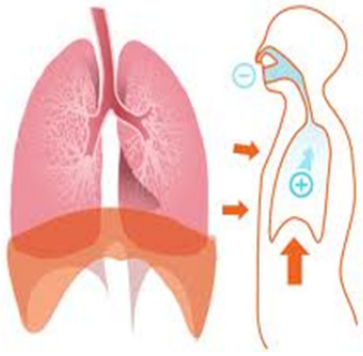
செய்முறை

- செய்முறை மற்றும் அதன் பயனை நபரிடம் தெளிவாக விளக்குதல்.
- நபர்களை சுஹாசனா நிலையில் அமரக் கேட்டல். பின்பு முதுகினை நேராக வைக்கவும்.
- பின்வரும் நான்கு படிகளைச் செய்யும்போது மனஒருநிலையைத் தனது நெஞ்சின் மீது வைக்கவும்.
- **படி 1** : உட்சுவாசம், உட்சுவாச முடிவு. இதில் ஒரு நிலையை சுவாசத்தின் மேல் கட்டுப்படுத்தி 4 வினாடிகள் எளிமையாகவும், மெதுவாகவும் சுவாசத்தை உள்ளிழுக்கவும். இரண்டு நாசிகளின் வழியே சுவாசத்தை உள்ளிழுக்கவும்.
- **படி 2 :** சுவாசத்தை நிறுத்திப்பிடித்தல். இதில் ஒரு நிலையை சுவாசத்தின் மேல் கட்டுப்படுத்தி 4 வினாடிகள் உள்ளிழுத்த காற்றை நுரையீரலினுள் நிறுத்தவும்.



உட்சுவாசம், உட்சுவாச முடிவு

- **படி 3 :** வெளி சுவாசம், வெளிசுவாச முடிவு. இதில் ஒரு நிலையை சுவாசத்தின் மேல் கட்டுப்படுத்தி 6 வினாடிகள் உள்ளிழுத்து பயன்படுத்த காற்றை நுரையீரலில் இருந்து வெளிவிடவும்.
- **படி 4 :** சுவாசத்தை நிறுத்திப்பிடித்தல். இதில் ஒரு நிலையை சுவாசத்தின் மேல் கட்டுப்படுத்தி உள்ளிழுத்த காற்றை நுரையீரலில் இருந்து வெளிவிட்ட பிறகு, 2 வினாடிகள் சுவாசத்தை நிறுத்திப் பிடிக்கவும்.



வெளி சுவாசம், வெளிசுவாச முடிவு

- ஒவ்வொரு சுவாச முறையின் கால நேரங்கள், மேற்கண்ட 4 படிகளில் முறையே 4 : 4 : 6 : 2 மற்றும் 20 வினாடிகள் ஓய்வுடன் செய்ய வேண்டும். இதைப் போன்று 10 சுவாசமுறையைச் செய்யவும்.
- 10 சுவாச முறை முடிந்தபின்பு மெதுவாகவும் ஆழமாகவும் ஒரு சுவாச முறையை எடுத்து பிராணாயாமாவை நிறைவு செய்யவும்.
- மீண்டும் மெதுவாக பழைய நிலைக்கு வரவும்.

Appendix - IX. C. Prophylactic Information on Postnatal Blues.

Aims: At the end of the prophylactic information, postnatal mothers will be able to gain knowledge regarding postnatal blues and perform appropriate behavior to prevent postnatal blues.

Objectives: At the end of the prophylactic information postnatal mothers will be able to,

- understand the phases of maternal adjustment.
- identify signs and symptoms of postnatal blues.
- mention the problems faced by the postnatal mothers.
- state the practical suggestions for the first week at home.
- discuss the strategies to make life a little easier in the early days of being a parent.
- list out the adaptive measures regarding body image.

Audio Visual Aids: Flip charts, Roller board, hand out, and realia.

Teaching Method: Lecture cum discussion and Demonstration.

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
1.	3 Min	Introducing the topic to the mother	**INTRODUCTION** Pregnancy and puerperium are highly stressful period in women's life the mother is threatened by various changes such as Body image, unconscious intrapsychic conflicts related to pregnancy, childbirth, and motherhood. Pregnant women develop mild psychological symptoms in the puerperal period, which is called as the postnatal blues. The transition of parenthood was viewed as a crisis. Usual methods of coping often seem to be in effective. Some parents can be so distressed that they are unable to be supportive of each other. Strong emotions such as helplessness, inadequacy and anger that arise when dealing with a crying infant catch many parents unprepared. Parents are stimulated to try new coping strategies as they work to master their new roles and reach new developmental levels.	Introducing with the help of roller board.	Listening and contributing.

<table>
<tr><th>S.No</th><th>Time</th><th>Objective</th><th colspan="3">Content</th><th>Teacher's Activity</th><th>Learner's Activity</th></tr>
<tr><td>2</td><td>6 Min</td><td>Understand the phases of Maternal Adjustment</td><td colspan="3"><table>
<tr><th>Phase -Time</th><th>Behaviour- Task</th><th>Coping Strategies</th></tr>
<tr><td>Dependent Phase or Taking In Phase 1-2 days after delivery</td><td>➢ The mothers dependency needs predominant this is partly due to her physical discomfort from possible perineal stitches, after pain partly due to her uncertainty in caring for her new born and also due to exhaustion that follows child birth.
➢ It is a time of great excitement a woman usually wants to talk about her pregnancy especially about her labour and childbirth.
➢ Mother may have expressed little interest in caring for her child.</td><td>➢ Requires reminders to rest.
➢ Regain physical strength.
➢ To ambulate enough to promote recovery.
➢ Need for fluid, food and deep restorative sleep.
➢ Selective use of comfort measures and pain medication.
➢ Encouraging her to talk about the birth. .</td></tr>
</table></td><td>Explaining with the help of flip chart.</td><td>Listening and understanding .</td></tr>
</table>

S.No	Time	Objective	Content			Teacher's Activity	Learner's Activity
			Dependent - Interdependent phase. **2-7 days after delivery.**	➢ Mother begins to take strong interest in caring for her child. ➢ Mother prefers to get own washcloth and to make her own decision. ➢ She often still feels insecure about the inability to care for her new child. ➢ She needs praise for the things she does well to give her confidence. Eg- Supporting the baby, breast feeding, and burping the baby.	➢ Resting when the baby sleeps. ➢ Planning with family member to do house hold work. ➢ Positive reinforcement begins in the care facility and continues after discharge at home.		

S.No	Time	Objective	Content			Teacher's Activity	Learner's Activity
			Interdependent Phase (or) Letting go Phase. 7 days after delivery.	❖ The woman finally redefines her new role. ❖ She gives up the fantasized image of her child and accepts the real one. ❖ She gives up her old role of being childless. ❖ It is a time of relinquishment for the mother and often for the father.	❖ Both parents may benefit, if given the opportunity to verbalize unexpected feelings and to realize that these feelings are common. ❖ The resumption of sexual intimacy seems to bring the parents relationship back into the focus.		

<table>
<tr><th>S.No</th><th>Time</th><th>Objective</th><th>Content</th><th>Teacher's Activity</th><th>Learner's Activity</th></tr>
<tr>
<td>3</td>
<td>2 Min</td>
<td>Identify the signs and symptoms of postnatal Blues.</td>
<td>
<table>
<tr><th>Post partum blues</th><th>Coping Strategies</th></tr>
<tr>
<td>The "pink" period surrounding the first day or two after birth characterized by heightened joy and feelings of well being is often followed by blue period.
Signs and Symptoms
Emotionally labile, Often crying, Depression,
Let down feeling, Restlessness, Fatigue, Insomnia, Head ache, Anxiety, Sadness and Anger.</td>
<td>❖ Remember that the blues are normal.
❖ Get plenty of rest.
❖ Use relaxation technique.
❖ Do something for yourself.
❖ Talk to your partner.
❖ Plan a day out of the house.
❖ If you are breast feeding give yourself and your baby time to learn.</td>
</tr>
</table>
</td>
<td>Explaining with the help of flip chart</td>
<td>Observing, listening and discussing.</td>
</tr>
<tr>
<td>4</td>
<td>2 Min</td>
<td>Mention the Problems faced by the mother</td>
<td>Problem faced by the mother.
❖ Deprived of the supportive care.
❖ Around the clock demand of the new baby.
❖ Increase of stress in relation to care of the baby.</td>
<td>Explaining with the help of roller board</td>
<td>Discussing and contributing</td>
</tr>
</table>

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
5	9 Min	State the practical suggestions for the first week at home.	**Activities of daily living** ❖ Use old cloths, which need not be reused. ❖ Request relatives or known person to prepare food for the first week following delivery. ❖ Adequately learn to breast feed before discharge. ❖ Gain adequate knowledge of bottle-feeding technique. **Visitors** ❖ Visitors should be limited or restricted. ❖ Partner should invite the visitors to another room. ❖ Family and friends should prepare and bring a meal or pick up items at the store.	Explaining with the help of flip chart	Listening and asking doubts

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
5		Contd.,	**Activity and Rest** ❖ To limit mothers activities. ❖ Get plenty of rest through out the day. ❖ To take adequate nutrition. ❖ Mothers can nap when the baby sleeps. ❖ Family, friends, and neighbors can be solicited for support and help with meals, house Cleaning, and picking up the baby. ❖ Do not need a bath every day. ❖ Sponge bathes the baby until the umbilical cord falls off. (Diaper area, under the arms, and neck) ❖ Pick a time for bath when the baby is awake before feeding. ❖ Plain warm water must be used. ❖ Using a mild soap like Johnson's or dove. ❖ Powders are not recommended.		

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
5		Contd.,	**Infant clothing.** ❖ Clothing is soft and make up of cotton. ❖ Dress the baby lightly when indoors and on hot days. ❖ Avoid too many layers of clothing, which may make the baby too hot. ❖ On cold days cover the baby's head when you go out doors. ❖ New cloths should be washed before putting them on the infant. ❖ Baby cloths should be washed with a mild detergent and hot water. ❖ Double rinse removes irritating cleaning agent or acid residue from urine or stools. ❖ Clothing and bed linen are dried in the sun. ❖ Bedding requires frequent changing. ❖ Plastic coated mattress should be washed frequently.		

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
5		Contd.,	**Infant safety** ✓ Never leave the baby alone on bed or table. ✓ Never put the baby on a cushion or a pillow. ✓ Do not keep pillows, large floppy toys, and loose plastic sheeting in the crib. ✓ Do not place the infant on his or her stomach to sleep. Side lying or back lying position is preferable. ✓ Do not throw an infant in the air during play. **Interpretation of crying and quieting techniques** Babies cry when they are – Hungry, need to burp, have a wet diaper, feel hot or cold, tired, bored and when they are sick or in pain.		

<table>
<tr><th>S.No</th><th>Time</th><th>Objective</th><th>Content</th><th>Teacher's Activity</th><th>Learner's Activity</th></tr>
<tr><td>5</td><td></td><td>Contd.,</td><td>
Stimulations
<table>
<tr><th>Visual stimulation</th><th>Auditory stimulation</th><th>Tactile stimulation</th><th>Kinetic stimulation</th></tr>
<tr><td>Look at infant at close range
Hang bright shiny object within 20-25 cm of infant face and in midline.
Hang mobiles with black and white contrast designs</td><td>Talk to infant
Sing in soft voice
Play radio and television</td><td>Keep infant warm
Hold caress cuddle
May like to be swaddled</td><td>Rock infant
Place in cradle
Use carriage for walk</td></tr>
</table>
</td><td></td><td></td></tr>
</table>

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
5		Contd.,	**BREAST FEEDING** **Antenatal preparation** ✓ Breast and nipples are altered by pregnancy, increased sebum secretion obviates the need for cream to lubricate the nipple ✓ Cracked and depressed nipple should be adequately treated. ✓ Massaging the breast maintenance of cleanliness should be carried out. ✓ Comfortable brazier that does not compress the breast may be worn to support the increasing weight. **Advantages of breast feeding** Ideal composition protects against infection, readily available, more convenient, natural contraception, laxative action, increases the bonding between the mother and baby**.**		

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
5		**Contd.,**	**Technique (Sitting Position)** • Mother psychologically prepares to feed, should drink milk, juice, water before feeding. • Wash her hands before feeding • Mother and baby should be in a comfortable position • Mother holds her baby in an inclined upright position on her lap • Baby's head on her forearm on the same side close to the breast • Baby's head being little extended • Infants mouth wide open and chin touching the breast • Mother should bend slightly forward and guide the nipple and areola into the baby's mouth **Lateral position:** Placing the child along her side between the trunk and the arm.	Teaching withthe help of chart and demo.	Observing and contributing

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
5		Contd.,	**After Feeding** The baby should be held upright against the chest and the back is gently patted till the baby belches out the air. **Preparation of Milk Formula for Feeding** • When breast-feeding is not possible prepare milk formula. • The dilution ratio is two parts of formula to three parts of sterile warm water. • Bottle and teat should be cleaned thoroughly from inside and outside with the brush then it should be sterilized and kept covered.		

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
6	6 Min	Discuss the strategies to make life a little easier in the early days of being a parent.	**Strategies to make life a little easier in the early weeks of being a parent** **I. Accept Help** ❑ Accept all offers of help ask friends and relatives wish to cook meals, cleaning or baby sit. ❑ Remember that giving makes others feel good, so you are doing them a favour too. ❑ If the budget allows, employ a cleaning and ironing person and use a nappy wash service. **II. Short cuts.** ❑ Become an expert at doing a quick, superficial clean and tidy around the house. Learn to love the weeds or in this case dust and unwashed dishes. ❑ Women should buy a couple of kaftans (front opening breast feeding) to put on in the morning, and wear one instead of a dressing gown.	Discussing with the help of hand out.	Reading, listening, and discussing.

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
			III. Be Kind to yourself. ❑ You must have some time on your own without the baby each week even if it is 2hours just on the bed or a trip to a hairdressers or time to read a book. ❑ Be selfish. Recognize that this is a tough time of enormous change and look after yourself. If your baby is asleep, unplug the phone, put a sign on the door and go to bed. ❑ Make sleep a number one priority. It is quite unlikely that your baby will remember whether the dishes were done or the house dusted. ❑ Share the experience of parenthood by teaming up with another parent whom you can ring if things are getting you down. **IV. Look at yourself.** ❑ Eat nutritious food. To increase physical and emotional well-being. ❑ Have easy meals and snacks that include fruits, vegetables and proteins. ❑ Take a good multivitamin tablet to ensure lots of vitamin B and minerals.		

S.No	Time	Objective	Content	Teacher's Activity	Learner's Activity
7	2 Min	List out the adaptive measures regarding body image.	**V. Change your thinking.** ❑ Don't feel guilty about the things that don't get done. ❑ Don't feel guilty if you feel depressed or trapped. ❑ When people give unwanted advice nod your head and smile. ❑ Don't waste energy arguing with others about the way in which you are going to do things; just accept the advice and do things on your own way. **Body Image** ❑ Mother express concern about regaining their normal figure some mothers have unrealistic expectation about weight loss and the time it takes for the body to regain its pre pregnancy shape. ❑ Weight loss should be gradual and about six months is usually required to loose the weight gained during pregnancy. ❑ Rigid restriction of food intake can lead to depleted energy, decreased immunity, and decreased production of milk.	Explaining with the help of chart.	Contributing, listening, and discussing

பிரசவ சோர்வூட்டு தடுப்புத்தகவல்

குறிக்கோள்

பிரசவ சோர்வூட்டு தடுப்பு தகவல் பற்றிய வகுப்பின் முடிவில் பேறுகால தாய்மார்கள் பிரசவ சோர்வூட்டு பற்றி அறிந்து அதற்குரிய நடவடிக்கைகளில் ஈடுபட்டு பிரசவ சோர்வூட்டை தடுக்க தெரிந்து கொள்வார்கள்.

உகத்திட்டுகள்:

பிரசவ சோர்வூட்டு தடுப்பு தகவல் பற்றிய வகுப்பின் முடிவில் பேறு கால தாய்மார்கள்:-

1. தாய்மை இணக்கின் நிலைகளை புரிந்து கொள்வார்கள்
2. பிரசவ சோர்வூட்டு பற்றிய அடையாளங்களையும், அறிகுறிகளையும் கண்டுபிடிப்பார்கள்.
3. தாய் எதிர்கொள்ளும் பிரச்சனைகளை அறிவிப்பார்கள்
4. பிரசவத்திற்கு பின் வீட்டில் ஒரு வாரத்திற்குரிய நடைமுறை ஆலோசனைகளை தெரிந்து கொள்வார்கள்.
5. பெற்றோராய் ஆன சில தினங்களில் வாழ்க்கையை எளிதாக்கக்கூடிய தந்திர குறிப்புகளைப் பற்றி கலந்துரையாடுவார்கள்.
6. உடல் பிரதிமை மாற்றங்களை ஏற்றுக் கொள்ளும் குறிப்புகளை பட்டியலிடுவார்கள்.

ஒலி, ஒளி உபகரணங்கள் : சுண்டித்திருப்பும் வரைபடம், கைப்பிரதி, சுருள்பலகை மற்றும் வரைபடம்

பயிற்றுவிக்கும் முறை : விரிவுரை, கலந்துரையாடல் மற்றும் செயல்முறை விளக்கம்.

வ.எண்	நேரம்	உகத்திட்டு	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
1.	3	தாய்மார்களுக்கு தலைப்பை அறிமுகப்படுத்துதல்	**முன்னுரை:** ஒரு பெண்ணின் வாழ்வில் கர்ப்பமும் பேறுகாலமும் மிகுந்த அழுதத்தத்திற்குரிய காலமாகும். இதனால் தாய் பலதரப்பட்ட மாற்றங்களினால் பயமுறுத்தப்படுகிறாள். உதாரணமாக உடல் பிரதிமை, சுயநினைவற்ற உள்மன கிலேசங்கள், கருவுறுதல், மகப்பேறு மற்றும் தாய்மை ஆகியவற்றினால் பயமுறுத்தப்படுகிறாள். ஒரு கருவுற்ற பெண்ணிற்கு பேறுகாலத்தில் சில உளவியல் மாற்ற அறிகுறிகள் ஏற்படுகிறது. இது பிரசவ சோர்வூட்டு எனப்படும். பெற்றோர் நிலைமாற்றம் என்பது ஒரு நெருக்கடியாக நோக்கப்படுகிறது. சாதாரணமாக சமாளிக்கும் முறைகள் அனைத்தும் நற்பயன் அளிப்பதில்லை. சில பெற்றோர்கள் ஒருவருக்கொருவர் ஆதரிக்க முடியாத அளிவிற்கு கடுந்துயரத்தில் இருப்பார்கள். உதவியின்மை, கோபம், நிறைவற்ற போக்கு ஆகிய கடுமையான மனக்கிளர்ச்சிகள் ஒரு அழுகின்ற குழந்தையை சமாளிக்கும்பொழுது தயாரற்ற பெற்றோர்களுக்கு ஏற்படுகிறது. ஆகையால் பெற்றோர்கள் புதிய சமாளிக்கும் முறைகளை கற்றுக் கொள்வதும், பயன்படுத்துவதும் இந்நாட்களில் புதிய பாத்திர தன்மையை மேற்கொள்ளுவதற்கு தேவையான ஒன்றாகும்.	சுருள் பலகையின் மூலம் அறிமுகப் படுத்துதல்	கவனித்தல் மற்றும் பங்களித்தல்

வ.எண்	நேரம்	உகத்திட்டு	பொருளடக்கம்			கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
2.	6	தாய்மை இணக்கின் நிலைகளை பற்றி விளக்குதல்	**நிலை மற்றும் காலம்**	**நடத்தை – வேலை**	**சமாளிக்கும் தந்திரங்கள்**	சுண்டி திருப்பும் வரைபடத்தின் மூலம் விளக்குதல்	பார்த்தல் மற்றும் கவனித்தல்
			சார்ந்த நிலை அல்லது எடுத்துக் கொள்ளும் நிலை மகப்பேற்றிற்கு பிறகு 1-2 நாட்கள்	❖ தாய்மார்களின் சார்ந்த தேவைகள் அதிகமாக இருக்கின்ற காலம் இது. ஓரளவிற்கு தாயின் உடல் க'டத்தினாலும் மற்றும் பிறப்புறுப்பில் தையல் போட்டதினாலும் மற்றும் அதனால் ஏற்படும் வலியினாலும் குழந்தையை பேணுவதற்கு உறுதியில்லாததினாலும் குழந்தை பேற்றிற்கு பின் ஏற்படும் களைப்பினாலும் ஏற்படுகிறது. ❖ இந்த காலம் ஒரு பூரிப்படையக் கூடிய காலமாக ஒரு பெண் கருதுகிறாள். இந்நேரத்தில் ஒரு பெண் தன்னுடைய கருக்கொள்ளுதல், பிள்ளை பேற்றின் வலி மற்றும் பிள்ளை பேறு ஆகியவற்றைப் பற்றி பேச ஆசைப்படுவாள் ❖ ஒரு தாய் தன்னுடைய குழந்தையை பேணி காப்பதில் சிறதளவே ஆர்வத்தை வெளிப்படுத்துவாள்.	❖ அதிப்படியாக ஓய்வெடுக்க நினைவூட்டுதல் ❖ உடல் திடத்தை மறுபடியும் பெறுதல் ❖ தேவையான அளவு நடக்க வைத்து உடல்நல பேற்றை முன்னேற செய்தல் ❖ தேவையான அளவு நீர், உணவு மற்றும் நல்ல தூக்கம் ❖ வலி நிவாரணிகளையும் மற்றும் ஆறுதல் அளிக்கும் வழிகளையும் முறையாக தேர்ந்தெடுத்து பயன்படுத்துதல் ❖ மலம், சிறுநீர் கழித்த பின்பு பிறப்புறுப்பை வெதுவெதுப்பான நீரில் கிருமி நாசினி கலந்து கழுவுதல். ❖ தாயின் பிள்ளை பேற்றை பற்றி மற்றவர்களிடத்தில் பேச தூண்ட வேண்டும்.		

வ.எண்	நேரம்	உகத்திட்டு	பொருளடக்கம்			கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			சார்ந்த- சாரா நிலை அல்லது எடுத்துக் கொள்ளும்- பிடித்துக் கொள்ளும் நிலை மகப்பேற்றிருக்கு பிறகு 2-7 நாட்கள்	❖ தாய் தன்னுடைய குழந்தையை பேணிக்காப்பதில் மிகுந்த அக்கறை காட்ட தொடங்குவாள் ❖ தாய் சிறிய வேலைகளை தானாகவே செய்ய முற்படுவாள் உதாரணமாக துணிகளை எடுக்க மற்றும் சிறிய தீர்மானங்கள் எடுக்க முற்படுவாள். ❖ தாய் சாதாரணமாக குழந்தையை பேணிகாப்பதில் அடிக்கடி பயப்படுவாள். ❖ சிறிய வேலைகளை அவ்வப்பொழுது சரியாக செய்து முடித்த தாயிற்கு பாராட்டுதல் தேவைப் படுகிறது. உதாரணமாக • குழந்தையை தூக்குவது • தாய்ப்பால் ஊட்டுவது • குழந்தையை தட்டி கொடுப்பது • மற்றும் தூங்க வைப்பது	❖ குழந்தை தூங்கும் போது ஓய்வு எடுப்பது ❖ குடும்ப உறுப்பினர்களோடு வீட்டு வேலை செய்வது பற்றி ஆலோசிப்பது ❖ குழந்தையை பேணுவதில் வேலைகளை சரியாக செய்யும் பொழுது பாராட்டி உறுதியாக வலுவூட்ட வேண்டும்.		

வ.எண்	நேரம்	உகத்திட்டு	பொருளடக்கம்			கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			ஒன்றையொன்று சார்ந்த நிலை அல்லது போக விடும் நிலை மகப்பேற்றிற்கு 7 நாட்களுக்குப் பிறகு	❖ தாய் முடிவாக தன்னுடைய புதிய பாத்திரத்தை மீண்டும் வரையறைத்துக் கொள்கிறாள். ❖ தாய் தன் குழந்தையை பற்றிய பழைய கற்பனையான ஒன்றை விட்டுவிட்டு உண்மையை ஏற்றுக் கொள்ளுவாள். ❖ தாய் தனது குழந்தையில்லா பழைய பாத்திரத்தை விட்டு விடுவாள். ❖ இந்த காலம் தாய் மற்றும் தந்தை இருவருக்கும் கைவிடப்பட்ட நேரம் போல் இருக்கும். ❖ புதிய தந்தையர்களிடையே தாய், சேய் உறவை காணும் பொழுது வேற்றுமைப்படுத்தப்பட்ட நிலை உண்டாவது இயல்பு. அவற்றில் சிலர் நேரிடையாக குழந்தையிடம் பொறாமை உணர்ச்சிகளை வெளிப்படுத்துவார்கள்.	❖ தாய் தந்தை இருவரும் இவ்விதமான உணர்ச்சிகள் இயல்பானவை என்பதை அறிந்து கொண்டால் பலன் பெறுவர். ❖ நெருங்கிய பால் உணர்வை மறுபடியும் தொடங்குவதால் பெற்றோர்களிடையே பழைய உறவுமுறை கவனப்படுத்தப்படும்.		

வ.எண்	நேரம்	உகத்திட்டு	பொருளடக்கம்		கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			அறிகுறிகள்	சமாளிக்கும் தந்திரங்கள்		
3.	2 நிமிடம்	பிரசவ சோர்வூட்டு பற்றிய அடையாளங்களும், அறிகுறிகளும்	**பிரசவ சோர்வூட்டு** பிரசவத்திற்கு பின் முதல் இரண்டு நாட்கள் மிகுதியான சந்தோ'ம் மற்றும் ே'மநல உணர்ச்சிகள் இருப்பதும் அதனை தொடர்ந்து பிரசவ சோர்வூட்டு நிலை ஏற்படும். அடையாளங்களையும், அறிகுறிகளும் ❖ உணர்ச்சியை கட்டுப்படுத்த முடியாமை ❖ அடிக்கடி அழுதல் ❖ மன அழுத்தம் ❖ கைவிடப்பட்ட நிலை	❖ பிரசவ சோர்வு என்பது வழக்கமான இயல்பு என்பதை மனதில் கொள்ளல் வேண்டும். ❖ அதிகமாக ஓய்வு எடுக்க வேண்டும். ❖ அழுத்தத்தை தளர்த்தும் நெறிகளை கையாளுக. ❖ தனக்கென்று ஏதாவது செய்ய வேண்டும்.	வரைபடம் மூலமாக விளக்குதல்	கவனித்தல் மற்றும் பங்களித்தல்

வ.எண்	நேரம்	உகத்திட்டு	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			❖ சோர்வு ❖ தூக்கமின்மை ❖ தலைவலி ❖ பதட்டம் ❖ கோபம் ❖ கவலை மற்றும் அமைதியற்ற நிலை ❖ கணவரிடம் பேசவும் ❖ ஒருநாள் வீட்டை விட்டு வெளியே கழிக்க திட்டமிட வேண்டும். ❖ நீங்கள் தாய்ப்பால் ஊட்டுபவராக இருந்தால் உங்களுக்கும், குழந்தைக்கும் கற்றுக் கொள்ள நேரத்தை ஒதுக்க வேண்டும்.		
4.	2 நிமிடம்	தாய் எதிர்கொள்ளும் பிரச்சனைகள்	**தாய் எதிர்கொள்ளும் பிரச்சனைகள்** ❖ ஆதரிக்கும் கவனிப்பை இழத்தல் ❖ பிறந்த குழந்தையின் முழு நேர தேவைகளை சந்தித்தல் ❖ குழந்தையை பேணுவதினால் ஏற்படும் அதிக அழுத்தம்.	சுருள் பலகையின் மூலம் அறிமுகப் விளக்குதல்	கவனித்தல் ஐயங்களை கேட்டறிதல்

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
5.	9 நிமிடம்	பிரசவத்திற்கு பின் வீட்டில் ஒரு வாரத்திற்குரிய நடைமுறை ஆலோசனை களை கூறுக	**அன்றாட வாழ்க்கைக்குரிய செயல்திறன்கள்** ❖ பழைய மீண்டும் உபயோகிக்க கூடாத துணிகளை பயன்படுத்தவும் ❖ உறவுக்காரர் மற்றும் தெரிந்த நபர்களிடையே பிரசவத்திற்குப்பின் முதல் வாரத்தில் உணவு செய்ய வேண்டுகோள் விடுக்கவும். ❖ மருத்துவமனையிலிருந்து வீட்டிற்கு செல்லும் முன் தாய்ப்பால் ஊட்டுவது பற்றி நன்கு கற்றுக் கொள்ளவும். ❖ புட்டிப்பால் கொடுக்கும் நுணுக்கதிறனை போதுமான அளவு கற்றுக் கொள்ளவும். **பார்வையாளர்கள்** ❖ பார்வையாளர்கள் அளவை வரையறை செய்ய வேண்டும். ❖ பார்வையாளர்களை கணவர் மற்றொரு அறையில் வரவேற்று அமர வைக்கவும். ❖ குடும்பத்தினர் மற்றும் நண்பர்கள் உணவு தயாரித்து கொண்டு வர வேண்டும் அல்லது கடையில் வாங்க வேண்டிய பொருட்களை வாங்கி வந்து கொடுத்து உதவ வேண்டும்.	சுண்டி திருப்பும் வரைபடத்தி ன் மூலம் விளக்குதல்	பார்த்தல்இ கவனித்தல் மற்றும் ஐயங்களை கேட்டறிதல

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			செயல்பாடு மற்றும் ஓய்வு ❖ தாய்மார்களின் செயல்பாடுகளை குறிப்பிட்ட அளவு தடை செய்யவும். ❖ நாள் முழுவதும் அதிகமான ஓய்வு எடுக்கவும் பிறந்த குழந்தை பொதுவாக ஒருநாளில் 20 மணி நேரம் முதல் மாதத்திலும், 16-20 மணி நேரம் இரண்டாம், மூன்றாம் மாதத்திலும் தூங்கும். ❖ போதுமான அளவு ஊட்டசத்துள்ள உணவை உண்ணவும். ❖ குழந்தை தூங்கும் பொழுது தாய்மார்களும் தூங்க வேண்டும் ❖ குழந்தையை தூக்கி கொள்ளுதல், வீட்டை சுத்தம் செய்தல் மற்றும் உணவு தயாரிப்பதில் உறவினர், நண்பர்கள் அக்கம் பக்கத்தினர் உதவியை நாட வேண்டும். **குழந்தையை குளிப்பாட்டுதல்** ❖ குழந்தையை தினமும் குளிப்பாட்ட தேவையில்லை ❖ குழந்தையின் தொப்புள் கொடி விழும்வரை குழந்தையின் கழுத்துப்பகுதி, அக்குள்பகுதி, இடுப்பு மற்றும் தொடைப் பகுதிகளை துடைத்து விடுதல் போதுமானது. ❖ குழந்தை விழித்திருக்கும் போது, பால் கொடுப்பதற்கு முன்பு குளிப்பாட்டும் நேரத்தை திட்டமிட வேண்டும். ❖ இளஞ்சூடுள்ள தண்ணீர் மற்றும் மிதமான சோப்புக்கட்டி (ஜான்சன், டவ்) பயன்படுத்த வேண்டும். ❖ வாசனைப்பொடி போடத் தேவையில்லை.		

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			குழந்தையின் ஆடை ❖ துணி மிருதுவானதாகவும், பருத்தியில் ஆனதாகவும் இருக்க வேண்டும். ❖ வீட்டினுள் இருக்கும் போது குழந்தைக்கு மெல்லிய ஆடைகளை அணிவிக்க வேண்டும். ❖ குளிர்காலத்தில் வீட்டைவிட்டு வெளியில் செல்லும் பொழுது தலையில் குல்லாய் அணிவிக்க வேண்டும். ❖ புதிய துணிகளை குழந்தைக்கு அணிவிக்கும் முன் துவைக்க வேண்டும். ❖ துவைக்கும் பொழுது மிதமான சோப்புக்கட்டி மற்றும் வெந்நீரில் துவைக்க வேண்டும். ❖ துணிகளை இருமுறை அலசினால் குழந்தையை உறுத்தும் வேதிப்பொருட்களை நீக்க முடியும். ❖ குழந்தையின் துணிகள் மற்றும் படுக்கை விரிப்புகளையும் சூரிய ஒளியில் உலர்த்த வேண்டும். ❖ பிளாஸ்டிக்கினால் ஆன மெத்தைகளை அடிக்கடி கழுவ வேண்டும். **குழந்தை பாதுகாப்பு** ❖ குழந்தையை தனியாக கட்டிலிலோ, மேசையிலோ விட வேண்டாம். ❖ குழந்தையை மெத்தையிலோ, தலையணையிலோ வைக்க வேண்டாம்.		

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			❖ குழந்தையின் படுக்கையின் அருகே தலையணையோ பெரிய பொம்மைகளையோ அல்லது பிளாஸ்டிக் கவர்களையோ வைக்க வேண்டாம். ❖ குழந்தையை குப்புற படுக்க வைக்க வேண்டாம். ஒருக்களித்து அல்லது மல்லாக்கப் படுக்க வைப்பது நல்லது. ❖ விளையாடும் பொழுது குழந்தையை காற்றில் மேலே தூக்கிப் போட கூடாது. **குழந்தையின் அழுகையை புரிந்து கொள்ளுதல் மற்றும் அமைதிப்படுத்தும் செயல்திறன்** ❖ குழந்தைகள் பசியாய் இருக்கும்பொழுது, துணி நனைந்து இருக்கும் பொழுது, அல்லது தட்டிக் கொடுக்க தேவைப்படும் பொழுது அழுக நேரிடும். ❖ குழந்தைக்கு அசதியாய் இருக்கும் பொழுது, சூடாகவோ அல்லது குளிராகவோ இருக்கும் பொழுது அல்லது உடல்நலம் சரியில்லாமல் இருந்தால் மற்றும் ஏதாவது வலி இருந்தால் அழ நேரிடும்.		

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்				கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			பார்வை தூண்டல் ❖ குழந்தையை மிக அருகில் பார்க்கவும். ❖ குழந்தையின் முகத்தில் இருந்து 20-25 செ.மீ இடைவெளியில் பளிச்சென மினுக்கும் பொருட்களை தொங்க விட வேண்டும். ❖ கருப்பு-வெள்ளை நிறங்களினால் ஆன அசையும் பொருட்களை தொங்க விட வேண்டும்.	**செவி தூண்டல்** ❖ குழந்தையோடு பேச வேண்டும். ❖ மெல்லிய குரலில் பாட வேண்டும் ❖ வானொலி மற்றும் தொலைக்காட்சி பெட்டிகளை போட வேண்டும்.	**தொடுவுணர்வு தூண்டல்** ❖ குழந்தையை வெதுவெதுப்பாக வைக்க வேண்டும். ❖ குழந்தையை தட்டிக் கொடுக்க வேண்டும். ❖ குழந்தையை தூக்கி கட்டித்தழுவ வேண்டும். ❖ முதுகை தேய்த்துவிட வேண்டும்.	**அசைவு தூண்டல்** ❖குழந்தையை தாலாட்ட வேண்டும். ❖குழந்தையை தொட்டிலில் வைத்தோ அல்லது தோள்களில் தூக்கி வைத்தோ தாலாட்ட வேண்டும். ❖நடைபயிற்சியின் போது குழந்தையை தள்ளுவண்டியில் அழைத்து செல்ல வேண்டும்.		

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			தாய்ப்பால் ஊட்டுதல் **பிரசவத்திற்கு முன் தயார் படுத்துதல்** ❖ கருவுறுதலினால் மார்பிலும், மார்புக் காம்பிலும் மாறுதல் ஏற்படும். ❖ பிளவுபட்ட உள்வாங்கிய மார்புகாம்பை சரியான முறையில் சிகிச்சை செய்ய வேண்டும். ❖ மார்பை அடிக்கடி சுத்தம் செய்து மற்றும் தேய்த்துக் கொடுக்க வேண்டும். ❖ மார்புகளை அழுத்தாத, சுகமான மற்றும் அதிகமாகும் மார்பின் எடையை தாங்கக் கூடிய உள்ளாடைகளை அணிய வேண்டும். **தாய்ப்பாலின் நன்மைகள்** ❖ சரிவிகித கலவை, தொற்றிலிருந்து பாதுகாத்தல், எந்நேரமும் கிடைக்க கூடியது, மிகவும் சவுகரியமானது, இயற்கையான கருத்தடை, மலச்சிக்கலை தடுக்க கூடியது. தாய், சேய் பிணைப்பை அதிகப்படுத்துவது.		

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			செயல்திறன் (உட்கார்ந்த நிலையில்) ❖ தாய் உளவியல் ரீதியாக தன்னை தயார்படுத்தி கொள்ள வேண்டும். அதற்கு முன் பால், பழரசம், தண்ணீர் பருக வேண்டும். ❖ கைகளையும், மார்புகளையும் பால் ஊட்டுவதற்கு முன்பு நன்கு கழுவ வேண்டும். ❖ தாயும் சேயும் வசதியான நிலையில் அமர வேண்டும். ❖ தாய் குழந்தையை தன் மடியில் தலையை சற்று தூக்கியவாறு வைத்துக் கொள்ள வேண்டும். ❖ குழந்தையை தலை தாயின் முன்புஜத்தில், மார்புக்கருகில் அதே பக்கத்தில் இருக்க வேண்டும். ❖ குழந்தையின் வாய் நன்றாக திறந்து தாடை மார்பைத் தொட வேண்டும். ❖ தாய் லேசாக முன்புறமாக வளைந்து குழந்தையின் வாயினுள் மார்பு காம்பையும் அதனை சுற்றியுள்ள பகுதியையும் வைக்க வேண்டும். **தாய்ப்பால் ஊட்டிய பிறகு** குழந்தையை மேல் நோக்கி, நேராக மார்பில் வைத்து குழந்தையின் முதுகை, ஏப்பம் விடும் வரை தட்டிக்கொடுக்க வேண்டும். பிறகு, குழந்தையை வலப்புறம் ஒருக்களித்து படுக்க வைக்க வேண்டும்.	செயல்முறை விளக்கம் மூலமாக கற்பித்தல்	கவனித்தல் மற்றும் பார்த்தல், ஐயங்களை கேட்டறிதல்

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
6.	6 நிமிடம்	பெற்றோராய் ஆன சில தினங்களில் வாழ்க்கையை எளிதாக்கக் கூடிய தந்திர குறிப்புகள்	**செயற்கை பால் கலவை தயாரித்தல்** ❖ தாய்ப்பால் கொடுக்க முடியாத சமயங்களில் செயற்கைபால் கலவை தயாரிக்க வேண்டும். ❖ இரண்டு பங்கு செயற்கைபால் மூன்று பங்கு சுத்தமான வெந்நீரில் கலக்கவும். ❖ பால்புட்டியையும் அதன் மூடியையும் நன்றாக உள்ளிருந்து வெளிப்புறமாக புருசு வைத்து தேய்த்து கழுவி, நோய் நுண்மங்களை அழித்து மூடி வைக்க வேண்டும். **குறிப்புகள்** **1. உதவிகளை ஏற்றுக் கொள்க** ❖ எல்லாவிதமான உதவிகளையும் ஏற்றுக் கொள்ள வேண்டும் மற்றும் உறவினர்கள், நண்பர்களை உணவு சமைக்கவும், குழந்தையை சுத்தம் செய்யவும், குழந்தையை பார்த்துக் கொள்ளவும் சொல்ல வேண்டும். ❖ மற்றவர்கள் நமக்கு கொடுப்பதினால் திருப்தி அடைவார்கள். ஆகையால் நீங்கள் அவர்களுக்கு அந்த கொடுப்பினையை செய்கிறீர்கள் என்பதை நினைவில் கொள்க. ❖ உங்களுக்கு வசதி இருக்குமானால் துவைப்பதற்கும், சுத்தம் செய்வதற்கும் வேலையாட்களை அமர்த்திக் கொள்ளவும்.	கைப்பிரதி மூலமாக கற்பித்தல்	கவனித்தல் கலந்துரையாடல் மற்றும் பங்களித்தல்

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			2. குறுக்கு வழிகள் ❖ வேலைகளை மேலோட்டமாகவும், சீக்கிரமாகவும் செய்து முடிக்கும் திறமையை வளர்த்துக் கொள்க (வீட்டை சுத்தம் செய்தல்) ❖ தூசியையும் கழுவப்படாத பாத்திரங்களையும் நேசிக்க பழகி கொள்ளுங்கள் அது உங்கள் சகிப்புத் தன்மையை அதிகரிக்கும். ❖ தாய்மார்கள் முழு அங்கிக்கு பதிலாக முன்புறம் திறக்கக் கூடிய துணிகளை அணிய வேண்டும். அது தாய்ப்பால் ஊட்டுவதற்கு வசதியாக இருக்கும். **3. உங்களுக்கு நீங்கள் கருணை உள்ளவராக இருங்கள்** ❖ வாரத்திற்கு இரண்டு மணி நேரமாவது குழந்தை இல்லாமல் உங்களுடைய வேலைகளுக்காக ஒதுக்க வேண்டும். ❖ சுயநலவாதியாக இருங்கள். உங்கள் குழந்தை தூங்கும் பொழுது தொலைபேசியை துண்டித்து மற்றவர்களால் தொந்தரவு ஏற்படாதவாறு தூங்கவும், உங்களை பார்த்துக் கொள்ளவும். ❖ உங்ளுடைய தாய்மையின் அனுபவங்களை மற்றொரு பெற்றோரிடம் பகிர்ந்து கொள்ளவும். அது உங்களுடைய இக்கட்டு நேரங்களில் உங்களுக்கு உதவும்.		

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
			4. உங்களை கவனித்துக் கொள்ளுங்கள் ❖ போ'ாக்கு உள்ள உணவை உட்கொள்ளவும், அது உங்களின் உடல் மற்றும் மனதின் ே'மத்தை அதிகரிக்கும். ❖ அடிக்கடி உணவையும், நொறுவை தீனியையும் சாப்பிட வேண்டும்.(பழங்கள், காய்கறிகள், புரதச்சத்துள்ள உணவுப்பொருட்கள்) ❖ உயிர்சத்து மற்றும் தாதுப் பொருட்கள் நிறைந்த மாத்திரைகளை எடுத்துக் கொள்ளல் வேண்டும். **5. எண்ணங்களை மாற்றிக்கொள்ளுங்கள்** ❖ நிறைவேறாத வேலைகளை.'. ஆசைகளை குறித்து குற்ற உணர்வு கொள்ள வேண்டாம். ❖ மன அழுத்த்தாலோ அல்லது பெற்றோராய் இருப்பதை வெறுப்பதாலோ க'ட்த்தில் மாட்டிக்கொண்டாலோ குற்ற உணர்வு அடையாமலும் பிரசவத்திற்கு முன் இருந்த காலங்களையோ எண்ணிப் பார்க்க வேண்டாம். ❖ தேவையில்லாத அறிவுரைகளை மக்கள் கொடுக்கும் பொழுது புன்முறுவலோடு தலையாட்டிக் கொள்ளுங்கள். ❖ மற்றவர்கள் ஒரு வேலையை செய்ய அறிவுறுத்தும் போது அவர்களோடு வாதம் செய்யாமல் கேட்டுக் கொண்டு உங்களுடைய சொந்த வழியில் வேலைகளை செய்யவும்.		

வ.எண்	நேரம்	உகத்திட்டுகள்	பொருளடக்கம்	கற்பிப்பவர் நடவடிக்கை	கற்பவர் நடவடிக்கை
7.	2 நிமிடம்	உடல் பிரதிமை மாற்றங்கள் ஏற்றுக்கொள்ளும குறிப்புகள்	**உடல் வாகு (அமைப்பு)** ❖ தாய்மார்கள் தங்களுடைய இயல்பான உடல்பிரதிமையை மீண்டும் பெற்றுக் கொள்வதில் மிகுந்த ஆர்வம் காட்டுகிறார்கள் தங்களுடைய உடல் எடை குறைவைப் பற்றியும் அதற்கு ஆகும் கால அளவையும் உண்மைக்கு புறம்பாக எதிர்பார்க்கிறார்கள். ❖ கர்ப்ப காலத்தில் ஏற்பட்ட எடை அதிகரிப்பை குறைக்க குறைந்த அளவு ஆறுமாத காலம் தேவைப்படும் என்பதை அறிந்து கொள்ள வேண்டும். ❖ கடுமையான உணவு கட்டுப்பாட்டை தவிர்க்க வேண்டும் (உணவுக் கட்டுப்பாடு நோய் தடுக்கும் சக்தியை குறைக்கும், பால் சுரப்பதைக் குறைக்கும்). ❖ பாதுகாப்பான செயல்திறன்களின் முக்கியத்துவத்தை கற்றுக் கொள்ள வேண்டும். (உடற்பயிற்சிகள் - ஆழ்சுவாசப் பயிற்சி, வயிற்று இறுக்கப் பயிற்சி, அடி வயிற்று பயிற்சி, முதுகுதசைப் பயிற்சி)	செயல்முறை விளக்கம் மூலமாக கற்பித்தல்	கவனித்தல் மற்றும் பார்த்தல், ஐயங்களை கேட்டறிதல்

Appendix - X. Training Certificate – Guided Imagery

THE VALLIAMMAL INSTITUTION (TVI)

11/6 B.B. Road 2nd St., Pankajam Colony , Madurai-625 009.

✆ 98942 49630 email: ananthibetsy@rediffmail.com

Certificate Course in Counselling, Yoga Therapy and Guided Imagery

Reg. No. 02/June 2011 Date: 04/07/2011

This is to certify that **Mrs. SHANMUGAM RAJAMANI** *has completed our* **CERTIFICATE COURSE IN COUNSELLING, YOGA THERAPY AND GUIDED IMAGERY** *(136hrs Part-time Education Programme designed and offered by experts) by effectively particpating in theory & practical classes and successfully completing all the exercises. She has been placed in* **FIRST CLASS**

Prof. Dr. S. Jeyapragasam M.Sc.,M.A.,M.A.,Ph.D.,
Director
Rajarajan Institute of Science (RISE)

Dr. B. Ananthi M.Sc.,M.A.,M.Phil.,Ph.D.,
Director & Secretary
The Valliammal Institution (TVI)

N.SureshKumar, MA, M.Phil (Clin. Psy). ***(PhD)*** Ph: 09940661655

Asst. Prof cum Clinical Psychologist,
Dept. Of Psychiatry,
Madurai Medical College,
Madurai - 2. **E.Mail : nsureshkumarpsy@yahoo.com**

To whom ever it may Concern

This is to certify that **Mrs. S. RAJAMANI, Ph.D (Part time) research Scholar for Psychiatric Nursing,** The Tamil Nadu Dr. M.G.R. University, Chennai-32. She has undergone training for ***Guided Imagery Technique,*** under my guidance and supervision for the period of 4 weeks (20 Sessions). She can able to use this therapy for her academic research [A study to evaluate the effectiveness of Complementary and Alternative Therapies for Postnatal mothers at GRH, Madurai-2].

[N. Suresh Kumar]

N. SURESH KUMAR. M.A., M.Phil.
Asst. Prof. Cum Clinical Psychologist
Dept. of Psychiatry
Madurai Medical College
Madurai-20.

Appendix - X.A. Training Certificate – Yoga

Regd. No.185/2002

MAHATMA GANDHI YOGA INSTITUTE

(A registered, secular Yoga Training & Research Institute)

6-A, First Street, Krishnapuram Colony, Madurai - 625 014.

Certificate

This Certificate is awarded to

Ms. / ~~Mr.~~ / ~~Selvan~~ / ~~Selvi~~ SHANMUGAM. RAJAMANI.

in appreciation of his / her scientific training in Yogasana, Pranayama, Naturopathy, Meditation and Stress Management Techniques at the Mahatma Gandhi Yoga Institute, Madurai

from 01.03.2012 *to* 31.03.2012.

T. Ravichandran

Dr. **T. RAVICHANDRAN** Ph.D.,
Founder

K.P. Gangadharan.

Yogarjuna **K.P. GANGADHARAN**
Director

வாழ்க வையகம்! வாழ்க வளமுடன்!

வளர்க வேதாத்திரியம்

உலக சமுதாய சேவா சங்கம்

26, இரண்டாவது கடற்கரை சாலை, வால்மீகி நகர்,
திருவான்மியூர், சென்னை – 600 041.
தொலைபேசி : 044 – 24411692

முழுமை நல வாழ்வுக்கு மனவளக்கலை யோகா
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சான்றிதழ்

திரு./திருமதி./செல்வன்./செல்வி.....S. JAGADEESH.....

.....என்பவர்

"முழுமை நல வாழ்வுக்கு மனவளக்கலை யோகா" அடிப்படைப் பயிற்சியைத் திருப்திகரமாக முடித்துள்ளார் எனச் சான்றளிக்கப்படுகிறது.

பயிற்சி நடந்த இடம்.....மதுரை அறிவுத்திருக்கோவில்.....

பயிற்சி நாள்.16.11.2012.முதல்.30.11.2012.முடிய

இணைக்கப்பட்ட அறக்கட்டளை முகவரி :

ஆன்மீகக் கல்வி மையம்
அறிவுத் திருக்கோயில்

ஆன்மீகக் கல்வி மையம்
அறிவுத் திருக்கோவில்
மதுரை மனவளக் கலை மன்றம் அறக்கட்டளை
24, பெசன்ட் ரோடு, மதுரை - 625 002

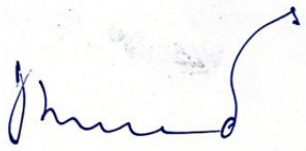
வாழ்க வளமுடன்
இறையருளும், குருவருளும் வற
ஆசியுடன்,

தலைவருக்காக
உலக சமுதாய சேவா சங்கம்

Appendix - XI. Editing Certificate

CERTIFICATE OF EDITING

This is to certify that the Manuscript titled "A study to evaluate the effectiveness of complementary and alternative therapy in terms of postnatal blues and self esteem among postnatal mothers admitted at Govt Rajaji Hospital, Madurai" prepared by Mrs. Shanmugam Rajamani, M.Sc (N), a Ph.D Scholar, doing Ph.D in Nursing under "The Tamilnadu Dr. M.G.R. Medical University, Chennai, has been edited by me the undersigned.



Prof. Jeevan David, MA, M.Ed, PGDTE
Professor,
English Department,
CSI Jeyaraj Annapackiam College of Nursing,
Merry DewHillls, Pasumalai,
Madurai.

Appendix - XII. Setting

1. Department of Obstetrics and Gynaecology

2. Postnatal Ward at Govt Rajaji Hospital, Madurai

3. Investigator selecting the sample

4. Investigator Providing Prophylactic information

5. Investigator Providing Guided Imagery

6. Investigator Providing pranayama

Appendix – 13 Plagiarism report

Turnitin Originality Report

check by Rajamani shanmugam rajamani
From Medical (The Tamil Nadu Dr. M.G.R. Medical University)

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